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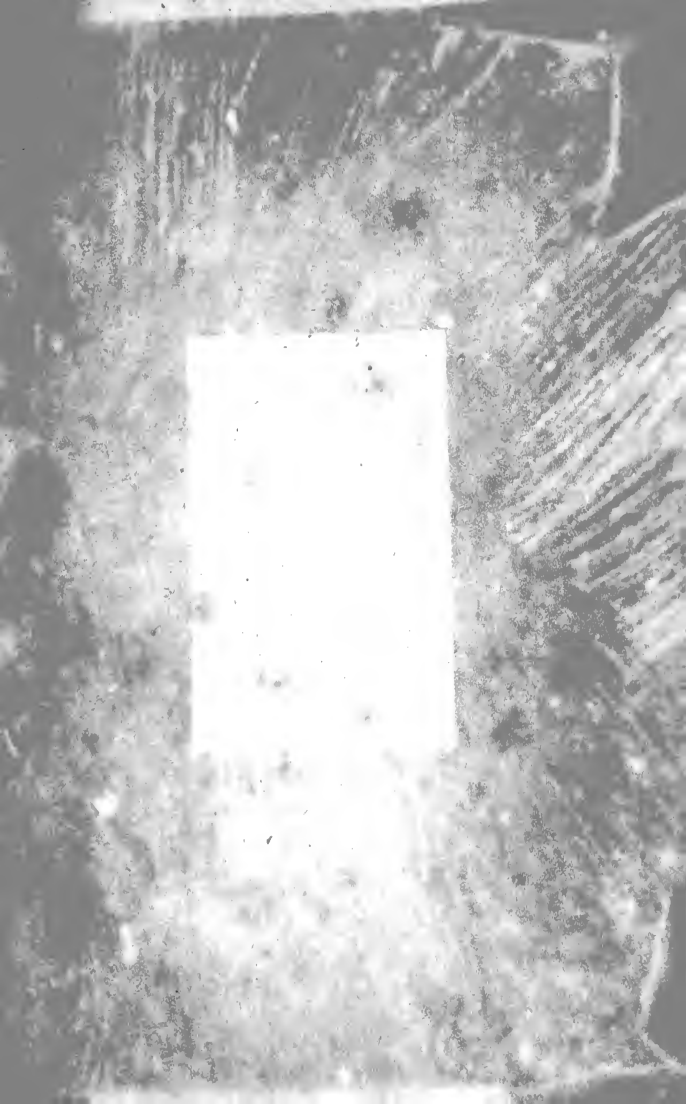
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THE

PENNSYLVANIA FARM JOURNAL,

DEVOTED TO

HORTICULTURE, AGRICULTURE, AND RURAL ECONOMY.

EDITOR,
J. L. DARLINGTON.
ASSISTANT EDITOR,
A. M. SPANGLER,

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J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

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Fruit Culture in Pennsylvania.

It is said to be a trait more peculiar to Farmers as a class than others, to be generally indisposed to vary from the beaten track of their profession, and slow to adopt innovations varying from their accustomed routine. While it will be admitted that this hesitation has often saved from trifling loss, it will be found still oftener to have *delayed* great pecuniary advantage. What, with the merchant may often be called a hazardous speculation, involving the loss of fortune, with the farmer who introduces a new implement, or some unusual rotation of crops, the disappointment from the experiment, if there is any, occasions but trifling inconvenience, and often no loss whatever. The channels and pursuits of business are continually changing. New markets and means of communication are opening. Commodities unthought of some few years since, now constitute active and im-

portant articles of commerce. The rapid extension of Railroads and the Telegraph, the great increase of steam power both on land and water, the continued and unprecedented increase of population, particularly in our large cities, has given an impulse to business, and occasioned a change in the relative sources of supply and demand as regards agricultural productions, which it will be well for the farmer to consider and adapt his business to the new state of things. In a very short time there will be a continuous Railway communication between Philadelphia and St. Louis, through the heart of our Commonwealth. Already, fat cattle, who used to travel from Indiana and Ohio, to the Atlantic cities, at great expense, and loss of time, and loss of weight, are brought down in cars built for the purpose, and can be rushed in, by a telegraphic communication, advising of a rise in the market, at a few hours notice. Recently thirty-five car loads of live hogs arrived in Philadelphia from the West. It strikes us that the natural course of things, very soon, when our main lines are completed, and intersected as they will be by laterals in all directions, will be to create a competition in the heavy articles of farm produce, such as beef, pork, grain, flour, &c., unfavorable to the farmer near the Atlantic coast where land is from \$50 to \$150 per acre, and that our farmers, particularly in Eastern Pennsylvania, should avail themselves of their proximity to Philadelphia, now with a population of half a million, and devote *more* attention than hitherto to certain perishable articles, which do not so well bear long carriage, such as fruits, vegetables, dairy products, butter, milk, Poultry, &c. We believe these to be far more profitable now, than fattening cattle or raising grain. We wish to speak, however, at present, particularly of Fruit culture, as we believe there is no product of the soil, in which the supply is so far short of the demand at this time and for some years past, and which will so well repay, for interest on cost of land, labor and expense of marketing, as the cultivation of *choice* Fruit. We speak of *all* kinds of Fruits, apples, pears, peaches, plums, quinces, che-

ries, raspberries, strawberries, blackberries, gooseberries, &c. Not that we recommend every farmer to go into the cultivation of all these, but only that they will all pay a handsome profit, and that each one must judge for himself, from his soil, location and facilities of access to market, which or how many of them it will be most profitable to cultivate. They will always sell in Philadelphia, and in many of our inland towns, there is a better market, the supply being poorer and the prices higher than in the city.—

We speak now of cultivating fruit as a regular branch of business, giving it the same attention as corn or potatoes, selecting the best varieties of each, and pursuing it properly and scientifically, from the planting of the tree, the *care* of it, which involves judicious pruning, manuring and cultivating of the soil, to the final preserving, gathering and marketing the crops. It is customary now to see the orchard, and fruit garden consisting together of one-quarter or one-half an acre, the most neglected part of the farm. Apples are apples, and a tree from a nursery crammed into a small hole, and often planted in a tough sod, and allowed to take its chance, if it has escaped being broken down by the cattle, at the end of ten or twelve years is at last visited by the owner, and if he finds no fruit, or perhaps some knotty, knurly specimen, calculated to set one's teeth on edge to look at,—Fruit culture is pronounced at once unprofitable, and that there is nothing like the good old rotation of corn, oats and wheat. While *hundreds* of acres have been, and are being planted out in New York and the Eastern States, and many thousands of barrels of apples have been shipped the present fall to Europe, the *systematic* cultivation of fine fruit as a material item in the business of the farm, may be said hardly to have commenced in Pennsylvania.—

We believe our soil and climate as favorable for it as elsewhere; our different Horticultural Exhibitions prove this and show what can be done. To be *profitable* however, it must be attended to properly, not only the varieties to be of the best, but the specimens as large and fine as can be produced. The price of Pennock and Grindstone apples, the Hedge and Bell and Choke pears, and hard Cling peaches, must not be considered evidence of the profits of fruit culture. We have seen this season in Philadelphia, Duchesse d'Angouleme and Bartlett pears selling from 18 to 25 cents each, Beurré Diels 12½ cts., fine Seckles 3 cts., while inferior varieties were dull at 75 cts. to \$1 00 per bushel, and the same relative prices will hold good with apples and all other fruit. We have never known the time when really fine fruit would not sell well, and believe that more can be realized from a few acres occupied in this way—in many instances

than from the whole produce of a farm, with any ordinary rotation of crops. There is no danger of the eating of luscious fruit going out of fashion. Not only is our domestic consumption very great and con-

tinually increasing, but there is also increasing rapidly a large demand for export, and the coast trade. Hundreds of barrels of apples have been shipped this last fall from Philadelphia, for Charleston and Savannah in the steamers, now plying regularly, and our exchanges inform us that over 6000 barrels went to Europe in three of the steamers from New York, and which brought, (the best quality) from \$6 to \$9 per barrel, the freight charged being only \$1 20 each. Baldwin apples and White Doyenne pears have been shipped to the East Indies, and arrived in fine condition; and also apples, peaches, and even strawberries to the West Indies. The introduction of steam on the ocean, and the ice house, have removed the obstacles to transporting fruits safely to foreign countries. In respect to choice pears, it seems useless to speculate about a foreign demand, when we are not half supplied at home, and will not be for years; but there is no doubt that their exportation, particularly to England, will become an item of great profit and importance. The English climate is unfavorable to many kinds of fruit; apples, pears, and peaches, especially, being too moist to develop and mature those saccharine juices, on which its excellence so much depends. The *regular* quotation of pears in Convent Garden market, London, is for pears \$1 to \$3 per dozen. Peaches 6 to 8 cents each.—Fruit culture, like any other business, requires to be successful, *judgement, intelligence, and energy* in its management. Not only must the best varieties be selected and *properly* cultivated, but a supply in season and out of season must be furnished for the market, and for this a properly constructed and well-ventilated Fruit room or cellar is absolutely necessary. The merchant does not force his goods to sale on a dull and falling market; but with wise foresight anticipates the season of comparative scarcity, and realizes a four-fold profit. So it must be with the cultivator of Fruit. Apples a few weeks ago were selling for \$1 25 per barrel, now they will bring that much per bushel. Winter Nelis, Glout Morecan, Beurré d'Aremberg pears will sell now at almost any price.

With the view of showing what has been done elsewhere, and to give some idea of what *may* be done in Pennsylvania, we have collated below a few statistics of Fruit culture. One small township in Massachusetts, has raised, the present season, 14,000 barrels of apples, which sold at an average of \$2 per barrel. An apple orchard, chiefly of the Rhode Island Greening, of one acre, in Wayne county, New York, produced, in 1847, 200 barrels of selected Fruit. Another one in the same county of 3½ acres, 650 barrels. Robert L. Poll, of Ulster county, New York, has raised from 4 to 6000 barrels of Newtown Pippin apples in one season, which have brought, in New York, \$6 per barrel, and in London, from \$10 to \$12. Dr. Underhill of New York, has a vineyard on the Hudson, of 20 acres, and sends some thousands of baskets of

grapes to New York, and which bring from \$6 to \$9 per 100 lbs. He thinks there is room for 20 vine yards in the same locality as his own. The yearly consumption of grapes in Paris is said to be ten millions of pounds. C. A. Cable, of Cleveland, has an orchard of 100 cherry trees, which has yielded in one year, over \$1000. A farmer near Darby, Pa., has 20 apple trees of two varieties, occupying half an acre, which have produced 300 bushels, and yielded a profit \$225. R. J. Hand, of Monroe county, New York, has sold \$440 of Northern Spy, and Roxbury Russet, from a single acre. A single orchard in Rockingham county, New Hampshire, of two acres, produces annually, 800 bushels of first-rate winter apples. In Orange county, N. Y., over \$300 worth of plums have been sold from one-quarter of an acre. The Reynolds, of Delaware, have nearly 1000 acres in peach trees, and have sent 5000 baskets in a single day to market, and have realized in one year, \$20 to \$30,000 clear of expenses. An acre of ground in strawberries, with proper culture, can be made to yield 100 bushels. A friend of ours in New Jersey, has marketed in Philadelphia the present season, over 200 bushels, at 12½ to 25 cts. per quart. The Patent Office report states that in 1848, in 17 days, 4,572 bushels of strawberries were sold in New York, 514 bushels in a single day. Over 80,000 baskets, equal to 833 bushels, and weighing probably 25 tons, were brought to the city in one day by the Erie Railroad. Of raspberries, Charles Downing, nurseryman, near Newburg, N. Y., states that one of his neighbors sold \$300 worth from one-third of an acre, one season, and from 3 acres realized a net profit of \$1,500. They were of the true Red Antwerp. The culture of Gooseberries is also very profitable, and we have heard, the present season, of nearly \$300 worth being sold from little over half an acre. As regards pear culture, the field is almost wholly unoccupied, and since the introduction of the Pear on Quince; obviating to a great extent the liability to blight, occupying but little ground, and making quick returns, we believe it to be as much, if not more profitable than the others. One of our friends in N. Jersey informs us he planted out 3 years ago, 300 dwarf pear trees, which averaged him this season one peck each, and at ten feet apart, they occupy less than one acre of ground. We do not know what the wholesale price was, but we know they were retailed at second hand from 12½ to 25 cts. each; less than half of this would realize \$600 to the acre, and of course the product will annually increase. Many persons are deterred from the Fruit business, by the length of time before the trees come into profit. This depends entirely on the attention they receive. Apple trees may be ten or twelve years before fruiting, or they may be made to produce a bushel each in five years from the planting. Dwarf pears often bear the first year they are put out, thus making almost immediate returns. We have known of a dwarf pear tree in Philadelphia

the present season to have produced five to six bushels. The cultivation of the ground between the trees where orchards are planted, and the planting of the smaller fruits, root crops, &c., will often not only repay all expenses, interest on land, &c., till the larger trees come into bearing, such as Apples, Pears, Plums and Cherries, but will in many localities, cover the cost of the land also. A full grown apple tree will yield from ten to forty bushels. Four hundred bushels may be considered a *reasonable* estimate for an acre. We close this article, which is much longer than we intended, by advising all disposed to go into the fruit business, to procure one of Downing's, Thomas', or Barry's Fruit Books, for directions as to selection of varieties, planting, pruning and general management.

Agricultural College and a Model Farm.

We learn from the American Farmer, that the requisite funds, \$50,000, have been raised to establish an Agricultural Department in connection with Delaware College, Delaware, and that efforts are now making "to secure the services of one of the best Agricultural Chemists in the country," as one of the Professors. It is also contemplated to establish in connection with the same, a model and experimental farm.

The State Agricultural Society of Maryland at its late fair, have also advocated "that a memorial be addressed to their Legislature for the endowment of a Professorship of Agricultural Chemistry, to be connected with St. John's College, Annapolis."—The public spirited men of these two states, without reference to party politics, appear to be unanimous and earnest on this subject. It seems already secured in Delaware, and there is every probability that Maryland and other states will soon follow. Is Pennsylvania going to be behindhand? Are our farmers so far ahead of those north and south of them, that no instruction is needed? Is the theory and practice of agriculture in Pennsylvania already perfect, and are the great fundamental principles, which lie at the root of all good farming, everywhere and in all countries, better understood here than in our sister states? Does our land produce its greatest capability, with the least labor, expense and impoverishment? Are our agricultural machinery and implements more perfect than elsewhere? Is our live stock—throughout the state, cattle, horses, sheep and swine, poultry, of the best and most improved breeds? Unless these questions can all be answered affirmatively, we also need a model and experimental farm, and an Agricultural Professorship; and it is to be hoped that some decided action on the subject may be taken by our State Society at its approaching meeting. Something of the kind seems required

by the times, and the example around us. It would result in a vast amount of good, to the substantial interests of the state, augmenting aggregate and individual wealth, and we cannot think the necessary legislation would be refused, if the subject were well understood, and a suitable report prepared in the Legislature. As it would be for the purpose of putting money into the pockets of the people, not to take it out, the action of their representatives would be sustained without doubt at home. Attached to a model and experimental farm of the kind we allude to, there should be an Agricultural Chemist, competent to analyze soils, for the benefit of the farmers of the whole state, who might also at certain seasons, visit the different county associations, and deliver lectures on scientific and practical Agriculture, on Geology, Mineralogy and Botany, so far as they are connected with the same, and who should be required to collect agricultural statistics and make annual reports, as to the modes of culture pursued in various sections. The model farm should be the repository for the reception and cultivation of new and foreign plants, seeds, vegetables, &c. New implements should be tested there and reported upon. Experiments in the culture of various crops should be accurately made, and their adaptation to our soil, climate and relative profit for particular localities, made public for the general benefit. Careful experiments should be made with the various improved breeds of animals, the best and most profitable reared, and placed within the reach of purchasers, who could visit the farm, and obtain reliable information as to their respective merits. This would be a very valuable feature of it. The model farm should also contain an arboretum of our own and foreign plants, trees and shrubs, open at all times to the public, and scientifically arranged, and also should have an experimental ground for testing the different kinds of fruit, and their adaptation to our soil and climate. The experimental garden of the Horticultural Society of London, contains 900 varieties of fruits, and upwards of 1500 have been tested there.

Without consultation with any one, it strikes us, these are some of the benefits to be attained by legislative action on the subject of agriculture and the establishment of a model farm, and we much hope the present session of our legislature will not close, without the initiatory steps being taken to bring it about.

POULTRY AND EGGS.—Fowls like the warm southern aspect, where they can huddle together in the sun during the middle of the day. Provide them such a place, and plenty of food, such as corn, barley, wheat, cobmeal, mixed with scalding water or hot potatoes, with occasional feeds of the flesh of young calves, plucks of sheep, and constant access to pure water, gravel, old mortar, oyster or clam shells and bones, all broken finely, and they will yield eggs in abundance through the cold weather.—*N. E. Farmer.*

Statistics of Stock in the United States.

The following is from the Journal of the United States Agricultural Society, and it contains much of interest.

HORSES.—If it should be necessary to place every farmer in the Union on horseback, there are 4,325,652 horses in the country, for their service. Ohio has the honor of rearing and keeping more horses than any other state; the whole number reported being 463,398. New York had 447,014, Pennsylvania 330,398, and Kentucky 315,581.

The improvement of four and a half million horses, worth at least \$200,000,000, is an object worthy of more attention than it has hitherto received. State and County Agricultural Societies have done something, and the high price of good animals more, to encourage the breeding and rearing of superior roadsters, and good horses of all work. But the years of service rendered by a majority of them are fewer than they ought to be in this country. To prolong their lives, and increase their value, their natural wants, constitution and diseases must be more studied, and better understood by those that own and use them. We ought to excel all other nations in the number of fine horses, for we possess unequaled advantages for producing them to any desirable extent.

ASSES AND MULES.—Of these useful animals the census gives only 529,070 in all the States and Territories. New Mexico had 8,654, and only 5,079 horses; Tennessee is the largest producer of mules, reporting 75,903; Kentucky had 65,609; Alabama 58,895, and Georgia 57,379.

The growing of mules is profitable, and the business has been considerably extended within the last two years.

MILCH COWS.—The number of cows exceeds the estimate that we have had occasion to make of this kind of farm stock, in all the states except New York, where the returns are below what we expected from the number given by the State census of 1845. The whole number of cows in the United States two years ago, was 6,991,946. Of these New York had 931,324; Ohio, 544,499; Pennsylvania, 530,224, and Georgia, 334,223.

Cows differ more in value for milking purposes than is generally supposed. Thousands fail to pay their way, and are a positive tax on their owners; while a first rate milker yields a large profit on the food consumed. How to banish all indifferent and worthless kinds, and fill their places with superior animals, is a question for the intelligent growers of neat stock to consider. Deterioration is practiced by a hundred farmers where improvement is duly studied by one. As a general thing, cows and their offspring must be better kept before any decided change for the better is attainable. High quality in ancestral blood avails nothing in the veins of a starved calf. Without good keeping the breeds of stocks are utterly worthless.

WORKING OXEN AND OTHER CATTLE.—We are not informed to what age young steers must attain before they are entitled to rank as "working oxen;" or whether, in case they have never been subjected to the yoke, they are excluded, no matter what their years, from the catalogue of "working cattle." We suspect that entire uniformity in reporting "working oxen" and "other cattle," has not been observed in all the states. Be that as it may, the later number 10,265,180; while the former are set down at 1,698,261. By adding together the milch cows, working oxen and other cattle, it will be seen that the aggregate of neat stock was 18,355,387 head. New York

contains nearly three times as many oxen as Ohio or Pennsylvania. New York has 178,909; Ohio, 65,381; Pennsylvania, 61,527; Missouri, 111,268, which places the latter next to New York in this kind of stock.

SWINE.—It is pretty evident that many American farmers think more of hogs than of sheep, for their hogs out number their sheep by nearly ten millions. This is a singular fact, and in the judgment of many, indicates a badly cultivated state which so greatly prefers the flesh of swine to that of sheep, to say nothing of the superiority of wool to hair. Over thirty million hogs, (30,315,719) are a sufficient stock to render pork and bacon making as it really is, a very important branch of American husbandry. Tennessee takes the lead in this department, keeping nearly four times more swine than sheep. Of the latter, the census gives her only 811,591; but of hogs she claims 3,114,111. Kentucky has 2,851,163. Indiana is ahead of Ohio in the pig line, having 2,268,776; while Ohio is content with 1,964,770.

VALUE OF LIVE STOCK.—The value of live stock in the United States is returned at \$543,822,711. Of this large sum, New York claims \$73,570,499; Ohio, \$44,111,741, and Pennsylvania, \$41,500,053. If we add the value of live stock, farm implements and machinery, to that of farms, the whole investment is found to be \$3,962,353,395. If to this be added the usual increase of two years, and the estimated value of the slaves engaged in agriculture, the whole amounts to five billions, or five thousand millions of dollars.

New York Milk Trade,

The number of farmers engaged in the milk business, according to the New York Evening Post, to which the following facts are due, is little over 300, and the number of cows possessed by them a little over nine hundred. These, at fifteen dollars each, will come to \$135,000, and the land necessary for their support, of three acres to an animal, will amount to twenty-seven thousand acres. The value of horses engaged in the distribution of the milk, is forty-five thousand dollars; the horses connected with the transportation of country milk alone, travel daily twice as far as from New York to Liverpool. There are three hundred wagons worth a hundred dollars each. Ten thousand cans are used, valued at \$35,000. The loss for wear and tear of these is great, and estimated at about five per cent. on the profit of sales.

Two hundred and fifty companies and single dealers are estimated to receive milk from the country, sell from 200 to 6000 quarts daily. Many hotel restaurants and boarding houses make contracts with the farmers, and get their milk from them directly at three and four cents a quart. The sum paid for pure milk last year in New York, was over one million eight hundred thousand dollars; about one-fourth of which was paid for the water with which it was diluted. The amount of the milk and water was about thirty-one millions and a-half quarts, and about one hundred and forty-six thousand dollars were paid for transporting it.

What has been spoken of comprises about one-third of the article consumed, and is called pure country milk; the other two-thirds are composed of the produce and swill of the grain stables of New York and the vicinity. The number of cows thus fed is fifteen thousand. Their value is less by twenty-five per cent. than country cows; but after being dry and fattened, if not enfeebled by the disease so

incident to such cattle, they will bring nearly as much it is said, as grass-fed cattle, and are probably served up at tables with no suspicion of their history. The cows fed on grain and swill are estimated to be worth one hundred and fifty thousand dollars; and, though proportionally less in value, yield a profit about two-thirds greater than that realized on the sale of the pure country article. The swill milk is adulterated about one-fourth more than the country milk. The number of quarts daily produced by these establishments, which undergo a remarkable increase in the hands of the hucksters, may be estimated at one hundred and eighty thousand quarts daily. This is three millions seven hundred thousand yearly; which, at four and a-half cents, amounts to nearly three millions of dollars.

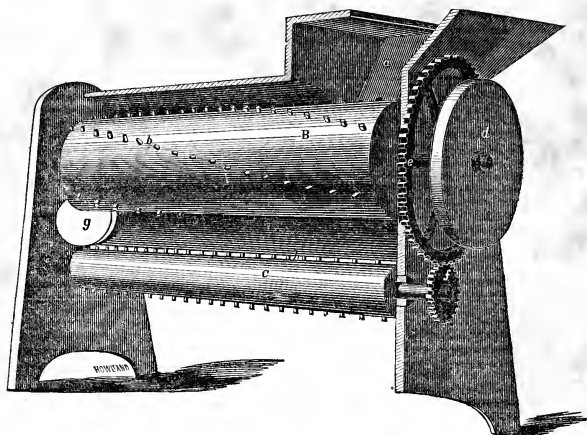
The number of persons one way or another engaged in the distribution of this milk in New York, Williamsburg and Jersey City, may be set down at twelve hundred, at weekly wages of about six dollars each. Horses connected with it are about eight hundred, worth eighty thousand dollars; and wagons, cans, &c., one hundred thousand dollars more. The total value of carts, horses, cans, other utensils and cows in city and country, concerned in the product and distribution of both kinds of milk is estimated at nearly six hundred thousand dollars. The total annual receipts from its sale may be reckoned at six millions, as follows:

Pure country milk, - - - - -	\$1,350,000
Pure swill milk, - - - - -	2,550,000
Water, chalk, magnesia, molasses, &c., - - -	1,250,000
	<hr/>
	\$6,050,000

The last item shows an immense sum paid for water, though it is commonly celebrated as the free gift of heaven. If to this be added what is paid for ice, and by the inhabitants of New York for the Croton, it will be found that few articles are more expensive than water, covering though it does three-fourths of the surface of the earth. In its simple state, the largest amount of milk is consumed by infants and children; and when its deleterious nature is considered, their extraordinary mortality can excite no wonder. But the great proportion of the milk sold is probably used in cookery and the manufacture of confections; of which there is an immense consumption, especially in the summer. One of the largest saloons in New York is reputed to have converted five hundred quarts into ice cream in a single day last summer.

On the whole, the million and a quarter annually paid for the water, molasses, chalk and magnesia mingled in this drug, for so it then becomes, is probably laid out at a better bargain than the two millions and a half for the product of the swill.

AN INTELLIGENT HORSE.—Some years ago, the citizens of Centreville, Indiana, were often amused by the conduct of a horse, when, with others, he was turned into the barn-yard to be watered. One day, approaching the trough, and finding it empty, he seized the pump handle, to the surprise of the witnesses, between his teeth, and pumped water sufficient for himself and the other horses. Having thus begun, he was allowed, when so inclined, to wait upon himself and companions afterwards. But it was observed that he always drove the other horses away until he had quenched his own thirst, after which he pumped for the rest.



CORN SHELLER.

The accompanying engraving represents a Corn Sheller invented by William Reading, of Flemington, N. Y., and for which he obtained a patent 13th of July last. The above is a sectional view lengthwise. *n* is a toothed cylinder $7\frac{1}{2}$ inches in diameter and about 4 feet long, and is placed in the centre of an iron cylindrical casing *B*, 15 inches in diameter and 4 feet long. This cylinder and casing are supported in a frame in a horizontal position. There is a space of some $3\frac{1}{2}$ inches every where between the outer surface of the shelling cylinder and the inner surface of the casing which makes room for the free action of a mass of corn while it is operated upon by the cylinder. The corn is admitted into the machine through a good sized hopper *a*, placed at the end over the driving pulley *d*, where there is a piece cut out to admit it. An aperture is left at the opposite end, at the rising side of the shelling cylinder, through which the cobs are discharged, the size of which opening should be varied according to the condition of the corn to be shelled. This is readily done by a piece of sheet iron, or stiff leather, being fastened by one end to the machine, and allowing the other end to be turned, more or less, over the aperture as the case may require. The proper rate of speed for the cylinder is seven or eight hundred revolutions per minute, much less speed will not answer, and too much will break the grain; there are four rows of teeth *n*, standing three-eighths of an inch out from the surface of the cylinder *B*, and set $1\frac{1}{2}$ inches apart in the row, each row winding one-fourth the way round it, which carries the cobs out of the sheller. An opening is left in the bottom of the casing from end to end, in which is placed a small toothed cylinder *c*, upon

which the corn falls and is carried out of the casing through a small space upon each side of it, sufficiently large to allow shelled corn to pass, but to prevent the cobs; it is turned slowly, by the gearing *e* and *f*. This cylinder may be dispensed with, and slots (cut in the bottom of the case half an inch wide and 4 inches apart, running one-fourth the way round the case) may be substituted, which will discharge the corn.

The principle of this Corn Sheller consists, in operating upon a large mass of corn at the same time, with the whole surface of the shelling cylinder; and keeping the largest portion of this mass along the ascending side of the cylinder, which forms an elastic, self-adjusting bed for the cylinder to operate against, and using no rest of any kind, (other than that found by the ears and cobs,) and as the space between the cylinder and casing is large, it gives free play for the ears of corn to be properly adjusted by it, making the action free from any stationary obstruction to the ears; and their own gravity the principal resistance to its action; consequently it will wear much longer and run lighter than any other corn sheller in use, considering the rapidity with which it performs its work.

This machine is capable of shelling 80 bushels of corn per hour with one horse power. The ears of corn are thrown promiscuously into the hopper *a* with scoop shovels or baskets, and it effectually shells them without regard to their size, and discharges the cobs separate from the shelled corn without breaking cobs or corn.

This machine may be obtained at the Agricultural Warehouse, West Chester. See advertisement

Fall and Winter Management of Bees.

Your weak swarms that have not honey enough to pass the Winter, must be fed, or joined with other families. Feed them in any manner you please to effect the end desired. If your families are all rather short of honey, you had better feed all at once. This is effected by a trough, or box made tight, say 18 inches long, by 6 wide, and 4 deep. The honey or syrup of sugar, is poured into this trough, and covered with a *float*, or light board filled with small holes, or sawed through from end to end as many times as can be, with the interstices cut out on a bevel with a knife, to admit the honey to pass up. West India honey is the only article to feed, unless you use brown sugar. This honey is worth 75 cents per gallon, and weighs about 12 pounds to the gallon. It is kept in all large towns. Half honey and half sugar make a good feed. Any cheap *dry* sugar will do. Put your honey and sugar into a pot, or kettle, with a quart of water to about seven pounds of sugar, and heat to a boiling point, skim, and it is ready for use. Do the same if the sugar is used without honey.

If you cannot get honey easily, you should feed lightly on sugar alone, as the water is likely to evaporate in the cells, after a while, and the sugar to harden in them, consequently feeding syrup of sugar in the spring is much more desirable than in the fall.

If you have large sheets of empty combs, you can feed very well by warming your feed, and turning it from a piteher upon the comb till the cells are filled.

When *honey* is fed alone, or with sugar, there is danger of setting all your bees to robbing; hence, before you feed, you must contract the entrances to your hive so as two or three bees can pass at a time; and if the families are weak, so that but one can pass. You should contract the entrances, however, in September, whether you feed or not, to prevent robbing, but not too close.

As feeding should generally be done in October, those who have not done it should lose no time. Take the first warm, pleasant days, and feed as much as you can, in the shortest time, so as not to disturb the bees any longer than is necessary. You can feed them from the *chambers*, or under *particular* hives if you please, and leave such as have honey enough unfed. Feeding under the bees is done by raising the hive upon a box to fit its size. Then place the feed on the stand, within the box, it being open at top and bottom.

Joining two weak families is a good plan, when one hive has honey enough to winter on. The addition of another family will not reduce its stores one jot, strange, as it may appear, as bees consume less than half the feed when in large numbers that they do in small numbers, having to consume more food to keep up vitality.

The manner of joining is as follows:—About the first of December, or as soon as it is obvious that the bees will not leave their hives much, take the most numerous family and place it over the weaker one at evening, the latter being turned bottom up. Then by rapping the lower hive with a rod the bees will ascend and join those in the upper hive, and if they refuse to leave rapidly, a little smoke applied below to pass through them, will give them a start.

Dry cellars will answer to winter bees in, and any dark, airy upper room, but an *outer* box to cover over a hive, with the passage cut to correspond with the passage in the hive proper, is the best protection we know of. Or you may take *hay* or *straw* and surround your hives so that the bees may be well ventila-

ted, leaving their entrances open and the hives raised a little from the floor boards, then darken the passages with anything before them, so that the light shall not enter and attract the bees but in mild, sunny weather, and you can winter your bees in perfect safety.—*Northern Farmer.*

Princess Alice Maud Strawberry.

We extract below from the reports of the American Pomological Society, some account of this Strawberry, which would appear to be well worthy of attention. From some cause the merits of this fruit, have we think been overlooked. In Downing's and Thomas' Fruit Books, we cannot find it mentioned, and in Barry, "that it is a very large and handsome English variety, very productive, but of indifferent flavor." We have fruited it for two or three years, and find it of very large size, and the flavor *very good*. The flesh is rather firm, and it has always seemed to us, one of our very desirable kinds, for general cultivation, and have not been able to understand, why it is not more known. An enthusiastic Strawberry grower in Delaware, appreciates it as we do, and has had the like success. It is probable that as with the "Black Prince," soil and climate affect its quality. It ripens in Virginia eight days before Hovey's seedling. We think it much before this latter in respect to flavor, and hope it may have further trial.

NURSERY at LINNEAN HILL, near Washington, }
August 31st, 1852. }

MR. JOHN SEATER.—At a Meeting of the Committee of the Pomological Congress held yesterday, I was directed by them to request of you any facts with regard to your Alice Maud Strawberry, that it may be convenient for you to furnish. You will please to mention the time it was imported, and where from—your general success in cultivation—how many days in advance of Hovey's Seedling it is generally, in the same soil and exposure—what is the difference in size of your best specimens of each—how many berries to the quart from your best crops—what has been the best yield to any given quantity of ground—how have your plants stood the climate—how affected by the hot sun of summer and the severe frost of winter? To this you will add your method of cultivation.

Yours, truly,
JOSHUA PIERCE.

MR. JOSHUA PIERCE:—

Dear sir,—Your note was duly received. In answer to your inquiries concerning my Alice Maud Strawberry—first, you wished me to mention its faults. I answer, none to my knowledge. 2d. When imported, and who from? Mr. William Barrat, of Wakefield, Yorkshire, England, in the fall of '45 and spring of '46. 3d. How many days it ripens earlier than Hovey's Seedling, on the same soil and exposure? On an average of eight days. 4th. My success in cultivation? I have missed no crop since I commenced cultivating it; I believe it to be a surer crop than any variety I am acquainted with. 5th. The difference in size? I cannot say I am satisfied; for size and quantity Alice will beat Hovey's Seedling or any other variety I have seen, two to one. Note, I do not say but that a few fruit might be picked out of Hovey's Seedling as large as Alice Maud; I speak of the crop in general. 6th. Given quantity? I do not

know that my crop was more superior the past season than formerly; from a piece of ground measuring 60 feet by 135, we picked, on May 26th, about 25 quarts; on the 28th, 150 quarts; May 31st, 400 quarts; June 2d, 250 quarts; June 4th, about 200; June 6th, about the same quantity; at this time we suffered with drought which I should think cut the crop one-fourth short to what might have been expected. From beginning to end we picked fruit from the same ground for three weeks; from 30 to 40 qts. was the last picking. 7th. How it stands the climate? I have never seen Alice injured in the least by winter frosts, and I know of no strawberry that stands the heat and drought as well. 8th. Mode of cultivation? When convenient, prefer spring planting. I plant my plants from 8 to 12 inches in the rows, and 24 inches between the rows. I often plant between crops of early cabbage. I hoe through them the following summer, keep them clear of weeds, and crop off the runners as fast as they make; the following spring I throw in some kind of trash to keep the fruit from the ground. Tanners' bark is the most convenient thing that I can procure; it appears to answer the purpose very well.

Yours, with respect,
JOHN SLATER.

A Table

Showing the number of trees required to plant an acre of land, from ten to fifty feet apart:

Feet.		Trees.	Feet.		Trees.
10	EACH WAY.	435	31	EACH WAY.	45
11	" "	360	32	" "	43
12	" "	302	33	" "	40
13	" "	257	34	" "	37
14	" "	222	35	" "	35
15	" "	193	36	" "	32
16	" "	170	37	" "	31
17	" "	150	38	" "	30
18	" "	134	39	" "	28
19	" "	120	40	" "	27
20	" "	108	41	" "	26
21	" "	98	42	" "	24
22	" "	90	43	" "	23
23	" "	82	44	" "	22
24	" "	75	45	" "	21
25	" "	69	46	" "	20
26	" "	64	47	" "	19
27	" "	59	48	" "	18
28	" "	55	49	" "	18
29	" "	51	50	" "	17
30	" "	48			



French Merino Sheep.

The importance of improving our flocks, ought to attract the attention of every man in America who understands the meaning of the word improvement. Those who do not understand its meaning, will still continue to shear those little scrubby animals called sheep, with bare bellies and hairy backs, getting fleeces weighing at most, not over two and a-half lbs. on an average, and of a quality almost as worthless as that which a certain notorious character obtained at the shearing which gave a great cry but little wool. To those who delight in reading what improvement has done, we commend the following letter:

"Believing the subject of wool growing worthy of

some attention, I take the liberty to send you a wood cut engraved from a daguerrotype view of a group of French Merino Sheep, lately imported by William Chamberlain of your city, and myself.

The buck *Matchless* represented, is three years old, and weighed on the first of March last, 261 pounds. His fleece, sheared last June, of one year's growth, (after suffering the usual loss on the sea voyage,) was twenty pounds twelve ounces. This buck I consider equal to any that I saw while in France; and as to thickness and fineness of fleece, shape and constitution, he is acknowledged, by all who have examined him, to be equal to any of the breed.

The ewes here represented, weigh in fair condition about 125 pounds each. The average live weight of our whole flock of ewes, of this breed, after having been shorn, did not much exceed 100 pounds. The average weight of fleece, in the dirt, after a long sea voyage, was 12½ pounds. In selecting the ewes, I regarded a large size of secondary consideration, preferring those that would yield the most fine wool in proportion to the cost of keeping.

It is believed by many who are unacquainted with the French sheep, that they require more than ordinary feed and attention to keep them in good condition; but my experience with them thus far, leads me to the conclusion that they will thrive well on ordinary keeping. They require nothing more than a good pasture during the summer season. I gave mine nothing more the past season, neither do I intend to the present. They are well adapted to our climate, and will bear exposure to storms equally well with any sheep in the country. A portion of our flock were turned off to pasture after shearing, and came up to their winter quarters looking remarkably well; having had no shelter from the storms during the summer. I should be unwilling to say that I believed the French sheep greatly superior to all other

breeds in every respect, but believe that all experienced and impartial judges will admit that they possess the following desirable points, viz :

1. A good vigorous constitution.
2. They carry a heavy fleece of wool, of a fair grade of fineness.
3. They are gentle and docile in their disposition, and fatten easy.

The above qualities I believe are better combined in these sheep than in any others; but where wool alone is the object, I am of the opinion that there are other varieties of the Merinos of a less size, which will yield as much or more wool in proportion to their size and cost of keeping, than those under consideration. Some few improved flocks of the old Spanish stock, will perhaps compare favorably with them for the profitable production of wool; but the variety to which I have more particular reference, are known as the Silesian Merinos, of which I send you a cut and will send you a description for some future number of *The Plow*. I have washed our French sheep this year, and after shearing, will send you the result.—*The Plow*.

GEO. CAMPBELL.

West Westminster, Va.



Group of Silesian Sheep.

Cheap Wash for Cottages of Wood.

For the outside of wooden cottages, barns, out buildings, fences, &c., where economy is important, the following wash is recommended:—

Take a clean barrel that will hold water. Put in it half a bushel of fresh quick-lime, and slake it by pouring over it boiling water sufficient to cover it 4 or 5 inches deep, and stirring it till slacked.

When quite slacked, dissolve in water and add 2 lbs. sulphate of zinc, (white vitriol,) which may be had at any of the druggists, and which, in a few weeks will cause the whitewash to harden on the wood-work. Add sufficient water to bring it to the consistency of thick whitewash. This wash is of course white, and as white is a color which we think should never be used, except upon buildings a good deal surrounded by trees, so as to prevent its glare,

we would make it a fawn or drab color before using it.

To make the above wash a pleasing cream color, add 4 lbs. yellow ochre.

For fawn color, take 4 lbs. umber, 1 lb. Indian red, and 1 lb. lampblack.

To make the wash gray or stone color, add 4 lbs. raw umber and 2 lbs. lampblack.

The color may be put on with a common white-wash brush, and will be found much more durable than common whitewash, as the sulphate of zinc sets or hardens the whitewash.—*N. E. Cultivator*.

WINTER FEEDING.—Stock when fed during winter in well protected stable-sheds, etc., will consume one-fourth less food than when exposed to the inclemency of the weather.

From Journal of Royal Agricultural Society, by J. Barlow, V. S., Edinburgh Veterinary College.

PRIZE ESSAY--ON ABORTION IN COWS.

[CONCLUDED FROM PAGE 276.]

III. *Causes which, influencing the system or a part of it, act through it on the uterus.*—In many parts of the country, a belief exists that abortion is contagious. From extensive observation and inquiry, we find this opinion founded on the fact, that when abortion once commences in a herd of cows, it frequently affects them in considerable numbers. Whilst we must remember that this is not invariably the case, we are at the same time bound to confess that unless abortion be clearly dependent upon some temporary or accidental cause, it very frequently befalls a number of cows in the same stock the same season. In this, however, there is nothing to establish its contagious character, for many diseases well-known to be destitute of contagious properties will occasionally prevail very extensively among various kinds of animals. Much more than the simple extensive prevalence of a disease is required to prove its contagious nature: we must show,

a. That animals subjected to its supposed influence are affected in greater numbers than others; thus, on introducing an animal or animals affected with a disease among healthy ones, the latter to a greater or less extent, within a certain time, are affected by the same disease.

b. That the separation of diseased from non-diseased animals has a perceptible effect in arresting extensions of the malady.

c. That those animals earliest and most closely connected with the sick, are first affected.

d. That large numbers of animals remain unaffected so long as they do not mix with those which are diseased, although they live in the same building or neighborhood inhabited by those among whom the disease existed.

Now, admitting that abortion in its ordinary occurrence is a disease, and although, as has been stated, it may be induced by causes of various kinds (some of which have been named,) yet, having once occurred among a stock of cows, its further extension among them, does, at first view, seem conformable to the conditions here laid down as proving the character of diseases to be contagious. For cases can be adduced to show that when one or two cows in a herd have, from whatever cause, cast their calves, others pregnant will do the same; and that on a careful and early separation of those first aborting from others still pregnant, the latter remain unaffected.

There are, however, other considerations to be entertained here. In contagion, we assume, that matter in some tangible form, or minutely and invisibly diffused in a gaseous condition, emanating from a diseased animal, passes to some absorbing surface in the body of a healthy one, and there becoming further developed, produces disease also. We think the strongest advocate of contagion, in the present instance, is not prepared to assert that the discharge incident to abortion can be transmitted from the body of one cow to another in the ordinary course of things; and even if such transmission could be effected, we can hardly imagine how abortion could be induced thereby. It is, however, said that the odor attendant upon these discharges, on being smelled by pregnant cows, causes them to abort. But surely this smell cannot act directly upon the uterus, for this organ in itself possesses no power of detecting varieties of odor. We do know, however, that cows are especially acute in detecting, by the sense of smell, when

one of their companions has calved, either prematurely or at the full time of gestation. If a birth take place in the pasture, the cows will collect round the locality at the time, and for many days, even weeks subsequently, will visit and smell at it with a degree of apparent curiosity and pleasure. If a cow calve in the house, other cows are at once aware of the fact, as is shown by their looking about them, snuffing their noses, and by making the fondling noise usually uttered towards their young. It is, also, interesting to notice that if a cow at or near her full time of gestation, calve among a number of her pregnant companions, several of them will usually bring forth their young very soon afterwards, although appearances and record might have led us to suppose that their times of parturition would have been deferred, instead of so closely corresponding. Seeing then that cows are aware of the parturition of their companions, how do they become so? From noticing them at the time, and for various other reasons, we believe that the organ of smell is the channel or medium through which the impression or sense is communicated.

It remains, then, to inquire whether the sensation produced by a peculiar smell or odor can, by "*influencing the system, or a part of it, act through it upon the uterus,*" so as to cause abortion. Preparatory to this short inquiry (and as illustrating the kind of action to which we would refer) we may observe, that in the animal body, we often find a cause of disease acts through one part of the system upon another. For instance, a person with an irritable constituted stomach is seized with nausea or vomiting on smelling a peculiar odor or on seeing some disgusting object; here the eye becomes first cognizant of a cause which operates subsequently upon the stomach. A person with irritable bowels becomes affected with purging on "taking cold," or from having wet feet. Here cold, as a cause, acts first on the external surface, and operates subsequently on the bowels. Almost every animal has some part of the body more susceptible than the rest, and especially liable on that account to become affected by the causes of disease. On this depends the difference of constitution seen in the human being, and also in the lower animals. At the same time, we must remember that the various organs of the body, when in a state of health, act in obedience to certain stimuli; air is the stimulus to part of the respiratory action, and food is the stimulus to the digestive organs. If such stimuli are unnatural in amount or quality, they induce disease; impure air causes affections of the lungs, and food undue in amount or bad in quality produces diseases of the stomach and bowels.

The uterus and ovaries of the young virgin female of any animal, are organs of comparatively small size, and not being concerned in the performance of functions essentially necessary to the vitality of the body, they receive but a small supply of blood and nervous influence. At the adult period of life these organs, having attained their full development, exercise upon the system an influence of the most important kind. In the cow, at periods of œstrum, they receive a greater amount of blood, and their nervous susceptibility is greater than heretofore. If she be allowed intercourse with the male, conception follows; the presence of the fetus maintains a stimulus in the uterus which is continued till the time of parturition; the quantity of blood determined to it is enormous, and the peculiar kind of nervous influence required to take cognizance of its functions progressively increases as gestation advances. The gravid uterus then is the seat of a healthy excitement,

and the due preservation of this depends partly on a quiescent state of the rest of the system; hence the cow, during pregnancy, is more than usually docile. Some persons are of opinion that the imagination of a pregnant animal is easily acted on by impressions which, at other times, would scarcely produce any effect, and many cases can be adduced which show that sudden fright and intense mental emotion have been followed by abortion.

When a pregnant cow, then, is so situated that she can smell the odor arising from another cow which has aborted, we may reasonably expect that the sensation so produced will, from what has been stated, be attended with peculiar consequences. The circle of nervous influence, which establishes a connection between the organs of smell, the brain, and the uterus, will be influenced thereby, and the uterus, from the predisposing nature of its condition and functions, especially responds to this peculiar stimulus. Irritation applied to nerves, induces action in organs to which such nerves pass, and, in the present instance, action, as a result of nervous excitement, is induced in the uterus, which organ continues from time to time to act upon its contents till they are expelled. Thus we conceive it is that odors arising from cows casting calf induce abortion in others of their pregnant companions, and by adopting this explanation we can account for the apparently contagious nature of abortion, without admitting that it is contagious in reality. Other odors of an offensive kind are believed by some (and we think, with good reason,) to cause abortion. Cattle will often collect in numbers around places containing decomposing animal and vegetable matter, and by bellowing and tearing the earth with their feet and horns, will betray a high degree of excitement; this, especially to pregnant animals, cannot fail to be injurious.

Over-feeding seems sometimes to cause abortion, by promoting such a state of system in a cow as is unfavorable to the healthy development of the fetus. It is not animals in a plethoric habit of body that are best adapted for breeding; indeed, it is a common remark that fat cows have generally smaller calves than those not in such high condition. Large quantities of rich and stimulating food may favor the deposition of fat in a pregnant cow, but her circulating blood by being highly charged with nutritious material, becomes less adapted for the requirements of fetal subsistence. In some parts of the country, where cattle are fed on low, marshy ground, or on land yielding rank and succulent herbage, such as grows on meadows occasionally flooded, abortion will occur to a great extent. It seems here to be induced by the irritating or stimulating action which the herbage of these localities exercises on the bowels, which action, being of prolonged duration, ultimately influences the uterus. There is great sympathy, (so called) between the uterus and digestive organs; they lie in close connection with each other, are formed of the same kind of muscle and membranes, and are supplied with blood-vessels and nerves from the same common centres. Among organs in the animal frame so related, there is always a strong disposition to become affected, each in its own way, by much the same common causes of disease, provided those causes act with sufficient intensity. An opinion obtains in some localities, that abortion is produced by cattle drinking the water of particular streams and springs which contain an undue amount of mineral materials. Some waters are known not to agree with animals, more especially with man and the horse, and it is quite possible they may exercise an injurious effect on cows also, but whether any waters which cat-

tle will usually drink are really capable of producing abortion, observation and fair experiment have not yet, in our opinion, sufficed to prove. It is very rare indeed, that cattle, if left to themselves, will eat any kind of plants which produce injurious effects on the system; their exquisite sense of smell and instinctive knowledge cause them to avoid deleterious vegetables as food. We know of no cases in which abortion was fairly traceable to the action of the acrid or poisonous plants.

TREATMENT OF ABORTION.—This is to be considered under two heads; first, the *preventive*, and, second, the *remedial treatment*: the former is to be enforced when certain symptoms present themselves, which, as has been before shown, threaten abortion, and is also to be applied to prevent extension of abortion among healthy animals. The remedial treatment is to be employed in cases of actual abortion.

1. *Preventive Treatment.*—If there are grounds for believing that abortion is caused by mechanical injury, the owner of cattle must exercise strict vigilance over those to whom he intrusts the management of his stock. He must provide against them being apt to suffer from leaping, as they are liable, to do when mischief or other inducements tempt them to break their fences. If a pregnant cow has "hoove," the veterinary surgeon or person in attendance must adopt the most summary way of liberating or neutralizing the gas. Every cow should be separated from her companions immediately after she has cast calf, and placed in such a situation that all communication with them by means of smell or otherwise, may be prevented. She must be well supplied with bedding, which is to be kept clean by frequent changing. Care must be taken that the discharges do not collect about her, and if the placenta is retained, means must be used to neutralize the odor arising in consequence of its decomposition. The animal must be kept in a cool, pure atmosphere, and supplied with food and water in moderate quantity. It will be observed that many of the above precautions, which are here advised as means of preventing extension of smell subsequent to abortion, are also highly useful as means of remedial treatment.

Strict attention must be paid to the cows among which the affected animal was kept, in order that the premonitory symptoms of abortion may at once be noticed if they occur. The peculiar colored discharge, which has been before alluded to, is always to be taken as an indication of danger, and if, in addition to its appearance, there is a visible sudden increase in size of the outer organs of generation and udder, beyond what the period of gestation would warrant, we would have little reason to doubt that abortion will take place if means of prevention are not employed. The animal must be copiously bled, placed in a situation where she can be kept perfectly quiet, her diet must be moderate and of such a quality as will favor an open condition of the bowels. *No purgative medicine must be given*;—the irritation which this creates would increase the abortive tendency. Our object here is to tranquilize the system and the uterine excitement, and to attain this end we may advantageously administer sedative medicine. None is better than such a formula as the following: 2 oz. of tincture of opium, and 2 oz. of nitrous ether, mixed in an imperial quart of gruel, and given daily, or so long as circumstances seem to require it. Cold water may be copiously applied to the external parts of generation several times daily. We often find that if the above simple means are timely and energetically employed, the symptoms of abortion entirely disappear.

If the liquor amnii has been partially evacuated, and the animal, by arching her back and tail, by lying down and suddenly rising again, (as well as by exhibiting other usual symptoms,) seems actually in labor, the treatment just advised would not only be useless, but highly injurious also. Matters in this case must take their course, for it is only in the absence of the symptoms of immediate labor that blood-letting and the other means recommended can be employed.

If abortion takes place at an early stage of gestation, the premonitory symptoms are rarely noticed, the fetus with its membranes, will be expelled without occasioning much inconvenience to the cow, and oestrus will occur a few days afterwards. The animal, however, should not be allowed access to the male, for her organs of generation are in a state of morbid excitement, and connection with the bull under such circumstances is seldom followed by conception. The cow should be tied in the house until the oestrus has disappeared, and should be carefully watched for its next recurrence, which, if taking place at the natural period, she may be put to the bull and kept perfectly quiet a few days longer. If a cow has irregular periods of oestrus, such as at every ten days or a fortnight, she is almost always the subject of some ovarian or uterine disease, and on no account should such an animal be allowed to have connection with the male, or to be in company with pregnant cows, or cows which are taking the bull in ordinary regularity. Such beasts mostly go bellowing about the pasture for days together, they gradually grow thick and coarse in the head and neck, and their outer organs of generation lose much of the natural appearance; they are hurtful nuisances, and should be fed if they will feed, or disposed of in some other way, being utterly worthless for breeding purposes.

When the oestrus returns in a cow regularly every three weeks, and she takes the bull each period without conception following, and we have reason to believe that no sexual deficiency exists in the male, she may be put under treatment which will ensure pregnancy. She should not be allowed connection with the male until the latter part of the period of heat, and after taking the bull she should be bled freely, and confined several days after oestrus has disappeared. During the time of being kept up, a moderate amount of her usual food must be allowed; no medicine of any kind is needed, but, if the owner please, he may from time to time throw a pailful of cold water on the hinder parts of the animal, especially over the organs of generation. No cow after taking the bull, and while still in heat, should be allowed in pasture with other pregnant cows; her society unsettles them, and by smelling at her they receive impressions which act injuriously. When an indisposition to conceive, or, as it is sometimes termed, "*breaking bull*," exists extensively in a stock, and the cows in numbers are continually coming in heat, they should all of them be confined in the house till oestrus is about going off, then be put to the male, and confined for a day or two more. If the farmer thinks proper he may bleed them; this, beyond lessening their milk for a few days, will do no harm. The medicines which farriers and old women sometimes recommend to make cows "hold to the bull," or conceive, are unworthy of dependence.

A cow which has cast several times in succession, acquires such a habit, (if it may so be termed,) of doing so, that it is exceedingly difficult to overcome. Notice should be taken of the period of each abortion, and in her next pregnancy, a fortnight or

so before the accession of this period, she should be bled, tied up, and treated as before advised for prevention. She should be confined for some time, so as to ensure the utmost quietness. If such measures are not effectual towards promoting what is desired, it is best to feed or sell the animal. Such cows as this, on being taken to another farm or fresh herd, will very often take the bull and carry their calves to the full period of gestation.

In those unhappy instances where abortion to a destructive extent occurs in a stock of cows for years successively, and seems rather to increase than to diminish in prevalence, we have to contend with the pest in its most formidable character. A breeder or farmer does not like to sell animals to which he attaches great value, yet by separating the affected from the non-affected cows, and by adopting every other remedial and preventive plan of treatment, which his own experience or professional knowledge can suggest, he sees matters becoming worse season after season. We believe, that under the circumstances, nothing short of changing his affected stock, by feeding or selling them off, will be of any service. He may do so at a great sacrifice, but it will be less than the one which from appearances he will in all probability incur, by having every year a number of cows supplying neither calves, nor much amount of milk. The longer this decisive step is delayed after fairly trying other methods of prevention, the worse matters usually become; and hence the importance during two or three years, when abortions are few in number, and confined to much the same cows, of feeding or otherwise disposing of these animals.

If abortion be confined mainly to animals in high condition, it is generally fair to infer that over-feeding is the predisposing cause, and the other cows still pregnant may, at all events, be more limited in diet. If, on the other hand, it seems to depend on poverty in condition, a more liberal supply of food is the obvious remedy. When it is owing to the irritation or exhaustion caused by other diseases, such as consumption, dysentery, murrain, &c., there is little probability of any preventive measures being attended with success, even if it were worth while to employ them.

2. *Remedial Treatment.*—It has been stated, that when abortion occurs during the first few weeks of gestation, it does not seem to occasion much inconvenience or constitutional disturbance to the cow. At this period, as the fetus is of small size, the membranes are also in a rudimentary state of development, and are not so firmly attached to the uterus as they ultimately become; on this account they are readily expelled with their contents. Little treatment is required in cases of this kind, beyond keeping the affected cow from her companions, and also from the male.

Abortion occurring subsequently to the ninth or twelfth week, is a more serious matter. Here the premonitory symptoms may also have escaped notice, and the fetus may have been expelled without any difficulty, but the placenta is almost always retained, and becomes an offensive source of annoyance to the cow and her attendants. There is sometimes very little of it hanging from the vulva, and a slow decomposition, attended by discharge of a very peculiar and most offensive odor, is established in the protruding portion, as well as that retained in the uterus. Decomposition is commenced in some cases before abortion takes place, and little or none of the cleansing will make its appearance for some days after the expulsion of the fetus. The presence of this now foreign body in the uterus and vagina induces an

unhealthy inflammatory condition of the lining membrane of these organs, and, from the irritation thus established, it is not unusual for the cow to become feverish, refuse her food, and rapidly fall off in condition.

The foetus is to be securely buried as soon after abortion as possible. All persons agree in the propriety of adopting such a practice, but a singular difference of opinion exists with regard to the propriety of removing the cleansing, or of suffering it to remain. Those who advocate letting it remain, advise that the passages containing it should be kept as clean as possible, and that antiseptic preparations should be used to destroy the offensive odor which it generates. They seem to imagine that danger which they cannot describe is likely to arise if mechanical means are employed to remove it. A person, however, who understands the anatomy and functions of the organs concerned, is fully aware that such an idea is fallacious, and knows that, unless under some peculiar circumstances, he can take the cleansing away with perfect safety. It is surely better to do this than subject the cow to the well-known inconveniences of its retention. In order to satisfy himself of the propriety of removing it, the operator, after having the cow securely held, washes out the vagina with warm water; he then introduces his hand, well oiled, to feel if the os uteri is sufficiently open to allow it to pass into the uterus; if so, there is not the slightest danger in attempting to take the cleansing away. Should any part of the membranes be hanging from the vulva, they must be taken hold of by the other hand, twisted several times round, (so as to render them less liable to break,) and pulled at gently. By thus stretching them the operator is better enabled to feel with his hand in the uterus where the attachments between it and the cleansing are situated. He gradually passes his hand round the interior of the uterus and loosens the points of connection, commencing at the entrance and proceeding to the horns of the womb, to one of which the cleansing is mainly attached. He may require to exercise some degree of pulling or separating force with the hand thus employed, and should be careful not to tear the cleansing more than he can possibly avoid; it is always better to remove it at once (if possible) than piecemeal. When the hand can be passed into the uterus, and if decay of the cleansing be not too far advanced, there are very few cases in which we cannot remove it by exercising due precaution. After extraction has been accomplished, the uterus should be gently but well syringed with tepid water, among which a small quantity of chloride of lime may be dissolved. A competent operator incurs no risk of injuring the uterus, for all the necessary force of manipulation is applied to the attached points of the cleansing.

Some persons who have objections to the above mode of proceeding, in consequence of the extremely offensive stench, the disgusting nature of the discharge, or from an erroneous idea of injurious consequences which they suppose likely to ensue, attach weights to the cleansing, in order, as they imagine, to drag it away. The force thus applied mostly causes the membranes to break inside the vagina, and not being determined to the real points of attachment, is seldom of much benefit; moderate pulling force, occasionally applied by the hand, in a horizontal direction is much preferable, although but rarely effective in bringing the cleansing away. If the prejudice of the owner be such as not to allow of any mechanical interference for its removal, and if he be not incorrigibly careless and ignorant, he may wash the cleansing repeatedly with a solution of chloride

of lime, and inject a diluted form of the same into the vagina; this, with a plentiful supply of clean litter, will in some measure, overcome the effluvia always present in these cases. Some farmers smear the walls and wood work of their cowhouses with tar and melted pitch, to counteract, or, as they think, to prevent the smell alluded to; there is no harm in adopting such a practice, but there is little amount of good derived from it in comparison with that attendant upon taking the cleansing away, rigidly separating the affected animals from others, and otherwise treating them as here advised.

"Cleansing drinks," so called, are extensively prescribed by farriers and druggists in various parts of the country, under the idea that such compounds in some way or other promote expulsion of the cleansing. These drinks are, for the most part, composed of stimulating aromatic ingredients, combined with purgative and diuretic medicines. They are seldom productive of any good effects beyond those which depend on their purgative action, whilst their aromatic and resinous properties very frequently render them highly injurious, by acting directly on a class of organs previously irritated, and probably in a state of inflammation. A dose of saline purgative medicine, such as half a pound to a pound of Epsom salts, with an ounce of ginger, and half a pound of treacle, mixed in a quart or three pints of meal gruel, is frequently of service, and forms about the only "cleansing drink" which the non-professional man should trust himself to administer. If the animal be really weak and in low condition, half a pint to a pint of good ale may be combined with the drench here recommended. If the bowels are already sufficiently open to forbid the use of laxative medicine, ale with treacle-gruel may be given instead. Ergot of rye is much relied on by some, as causing expulsion of the cleansing. We have not found it to be a medicine to be much depended on in this respect. It has been given in two-drachm and half-ounce doses to pregnant rabbits and bitches daily, for weeks together without producing any perceptible uterine action. —See "Edinburg Medical and Surgical Journal," for 1840.

If the placenta is retained, and the hand of the operator cannot be introduced into the uterus, in consequence of contraction of the os uteri, and if no part of the cleansing can be taken hold of, the calf-bed must be syringed with warm water, by means of a suitable instrument, which the veterinary surgeon, for the most part, is alone competent to use. It is improper to attempt removal of the cleansing, as before advised, if the hand cannot be introduced into the uterus by applying a moderate degree of dilating pressure, or if the cleansing is so firmly attached as not to give way to the application of reasonable force.

After some cases of abortion, as well as after some of ordinary parturition, the cow is affected with severe straining, or bearing down, called after-pains. These will, in cases of abortion, sometimes continue for several days, and induce a highly feverish state of system in the suffering animal. They are occasionally accompanied by a discharge of blood, and are mostly observed when the cleansing is entirely retained in the uterus, and apparently depend on the already irritable calf-bed suffering under additional excitement induced by the dead weight and peculiar position of the cleansing, now to be regarded as a foreign body, and which it is desirable to expel. After ordinary parturition, these straining efforts are sometimes so energetic, as to cause "throwing down" of the uterus. Although this accident seldom occurs

after abortion, in consequence of the small size of the os uteri and outer passages, yet, for the relief of the animal, it is desirable that, if possible, these pains should be overcome. Two or three ounces of tincture of opium and two ounces of nitrous ether may occasionally be given in a quart of warm gruel. The hand should be introduced to ascertain if the cleansing be loosened, and, as is sometimes the case, entangled upon itself near the neck of the uterus; if it can be removed, or even drawn towards the vagina, straining mostly ceases.

A cow, after abortion, should be fed on good food, but of such a quality as will induce a lax condition of the bowels; boiled barley or linseed, cooked roots, as turnips and carrots, form excellent diet. If, from prolonged straining and other causes of irritation, she is so feverish as not to feed at all, she must be offered plenty of drink, and if she will take flour or linseed gruel, sweetened with treacle, we need be under no great anxiety regarding her not feeding. Provided she will neither eat nor drink, we must (during the time our best endeavors are directed to the removal of the real cause of irritation and fever) support her by administering gruel with a horn or bottle. The stimulating drenches of the farrier and cowleech must be strictly avoided; if any tonics or mild restoratives be really needed, the using of them can only safely be intrusted to the veterinary surgeon.

When abortion is caused by mechanical injuries suddenly inflicted, the uterus sometimes begins to contract, and forces the fetus into the os uteri and vagina, before these organs have been sufficiently dilated to allow its free expulsion. The cow may even continue straining for days, and all her efforts only seem to impact the fetus still more firmly, and some part of it, as the head, neck, or feet and legs, will, for this period, protrude from the vulva. In some cases, her strength becomes exhausted, and she may die undelivered. This untoward event more particularly occurs to young animals, where the passages to the uterus have not acquired that capacity which they attain during the process of natural parturition. The assistance of an experienced practitioner is required here, and, for the safety of the mother, he frequently finds it needful to dissect away the fetus piecemeal. In some cases, firm and judiciously applied pulling force will be sufficient to effect its abstraction; in others, an incision may be made with a suitable knife along the lower part of the belly and chest of the fetus, the viscera of these cavities removed, then, by drawing it at its head and legs, the sides of the body are compressed, and delivery is effected.

"Cross births," or "false presentations," seldom interfere with delivery in abortion occurring at an early period of gestation, but if it be delayed until within six or nine weeks of the time of natural parturition, they sometimes prevent expulsions of the fetus. False presentations with abortion are often more difficult to rectify than when they occur at natural parturition, and in cases of this kind the aid of an experienced and dexterous practitioner is required, whose best care is needed to ensure the cow's safety. If she had been straining for some time, and the liquor amnii is partly evacuated without any appearance of the fetus, the hand of the operator must be introduced to ascertain its position. The presentation is almost always unnatural if the fetus is not expelled within a reasonable time after rupture of the membranes, yet in some instances, although the water-bag has burst, the cow is cruelly allowed to pass several days under labor-pains, without attempts being made to relieve her. This is culpable neglect,

for delay of this kind always increases the danger and difficulty of delivery, and retards recovery. On introducing the hand it is possible that the os uteri may not be sufficiently open to allow the necessary manipulation; such being the case, steady attempts may be made to dilate it, and sufficient time allowed for the purpose. If the pains are very severe, an occasional dose of laudanum may be given to relieve them; *chloroform* is highly efficacious in promoting the same end. Some persons advocate bleeding, but this is a remedy which, under all circumstances of the case, we would rarely advise. Other practitioners recommend the application of extract of belladonna and other sedative substances to the os uteri; their beneficial action, however, is very doubtful. We believe that cautious, continued attempts at dilatation, by expanding the hand in the contracted part, affording due time for the efforts of nature herself, and the administration of tinct. opii, as advised, are the safest and most efficient means of promoting an enlargement of the os uteri. When the opening is sufficiently increased in size, the presentation, if false, must be rectified, and the fetus taken away. The methods of remedying these presentations must be left to the practitioner, and are chiefly the same as those required in like cases attendant on ordinary parturition. When delivery is completed, the cleansing must be taken away by adopting the method before advised for its removal.

After abortion, even in cases where the cleansing has been expelled, a discharge of a peculiar kind usually flows from the uterus for several weeks successively. It is different in character from the natural *lochia*, and if so copiously secreted as to interfere with the comfort and health of the animal, we may advantageously counteract its ill effects by occasionally syringing the uterus with tepid water and diluted solutions of the chloride of lime. Sulphate of iron in half-ounce doses, finely powdered, and given twice daily among a mash, will be found a very useful tonic; it also seems to possess some effect in arresting the discharge and in restoring the mucous membrane of the uterus to its healthy tone.

Cows, and especially young ones, which have aborted, and have had great difficulty in delivery or in getting rid of the cleansing, are frequently a long time before they will again "take bull." This indisposition for sexual connection with the male, induced by injuries which the uterus has sustained and the shock which the system as a whole has received, is best overcome by giving tonic medicines, using every possible local application to restore natural tone in the uterus, and especially by allowing plenty of good food, air, and exercise. Inflammation of the uterus sometimes succeeds abortion; it is induced most frequently by the rough usage to which the uterus is occasionally subjected, and is known by the animal becoming feverish, being off her feed, breathing quickly and laboriously, arching the back, straining, and voiding considerable quantities of brownish-looking fluid, tinged with blood, which, in advanced stages of disease, is mixed with portions of the inner lining of the uterus, emitting a highly offensive odor.

In treating this affection the uterus must be frequently but gently syringed with tepid water; hot sacks or cloths wrung from hot water must be laid on the loins; the bowels must be kept gently open by means of mild laxative medicines if required, and plenty of tepid water or gruel must be given to drink. When a favorable change is about taking place, the uterine discharge becomes lighter in color, and eventually assumes the character of pus; return

of the appetite speedily fellows, and a rapid abatement of the fever is also obvious. This disease, when owing to a considerable rent or tear in the uterus, is generally fatal in a day or two.

There are some few cases in which death succeeds abortion in a remarkably short space of time, and seems to come on without any apparent cause. It will, however, generally be found that in instances of this description the cow has been roughly handled, has been many hours and may be days, in painful labor, has had little nourishment afforded, and was, perhaps, constitutionally weak in the outset.

Practice of Shoeing Horses.

By CHARLES PERCIVAL, VETERINARY SURGEON, ROYAL ARTILLERY.

MR. EDITOR.—Sir: I have lately been devoting much attention to shoeing, and flatter myself that the horses under my care are as well shod as any in her majesty's service.

The shoe I found in use *here* was made concave next to the foot, and flat on the ground surface, than which, in my opinion, nothing can be worse. This shoe I have had reversed, making the latter as concave as the foot will possibly admit of, leaving only sufficient room between the shoe and the foot for the prickler to pass freely round, to remove dirt, &c. To the heels of the shoe I have given an inclined plane outwards on the foot surface, with three nails on the inside and four on the outside. The heels, instead of being cut off straight, are well sloped, and about the same thickness as the toe. The shoe one third as thick at the heel as the toe, recommended by the late professor, the majority of our horses could not travel in. There are many pernicious practices which smiths in general, if left to themselves, fall into, viz:

Mutilating the frogs by improper cutting. I have at length got my farriers to understand, that the only part of the frog which ever requires cutting, unless ragged, is the point, to prevent the sensible frog being bruised between it and the coffin bone.

2. Inflicting serious injury to the crust, by an improper use of the rasp, but especially the coarse side of it.

3. In fitting the shoes, by cutting too much out of the crust at the toe, to admit the clip. The shoe is consequently set too far back, instead of being fitted full to the crust, and afterwards rasping away the crust, making the foot in fact, to fit the shoe, instead of the shoe to fit the foot. This is a faulty practice, and very seriously so, which smiths in general are very apt to fall into; one, too, which renders the crust shelly, for that part into which the nails are driven from time to time, is in this way rendered weak.

4. In turning shoes, smiths in general do not attend sufficiently to bevelling or sloping the edge of the shoe, from the foot to the ground surface, which I consider of great importance, especially if horses are given to cut or interfere in their action.

5. Cutting the heels of the shoe off straight. This is also a very bad practice. If well sloped, like a shoe for hunting, to which there cannot be any objection, they are less liable to be pulled off by the hind shoe catching in them, and contribute more to the safety of both horse and rider.

6. Leaving the inner edges of hind shoes at the toe sharp, which, if rounded, will in a great measure prevent overreaches, as well as render the fore shoes less liable to be pulled off by their catching in the heels of the former. Squaring the toe of the hind shoe for horses that forge, or "carry the hammer and pincers," as it is termed, leaving the horn projecting

over the shoe, is, in my opinion, good as a general rule, not only preventing that unpleasant noise, but rendering horses less liable to overreach and pull off their fore shoes, provided, however, attention be paid to rounding the inner edge.

7. In rasping the under part of the clinches, farriers are very apt to apply the edge of the rasp improperly to the crust, forming a deep groove round the same, which cannot but be injurious to the foot, and, together with taking away too much of the crust in finishing off the foot, must have a tendency to render it shelly. Curving the shoe at the toe, after the French fashion, where horses go near the ground, I am very fond of; but I cannot see any advantage in it as a general practice.—*Veterinarian.*
Portobello Barracks, Dublin.

Adaptation of Crops to Market.

The farmer who is wide awake to his business should watch, as well as follow, the markets. He should know what crops will sell well. So far as he can form a probable or approximate opinion on this point, he should conform his cultivation to it. In some places, he can produce milk to advantage; in others, butter or cheese. Again, he may be so situated that neither of these articles will pay him so good a profit as some others. Here his main crop will be hay, there fruit; here potatoes, there squashes and other vegetables.

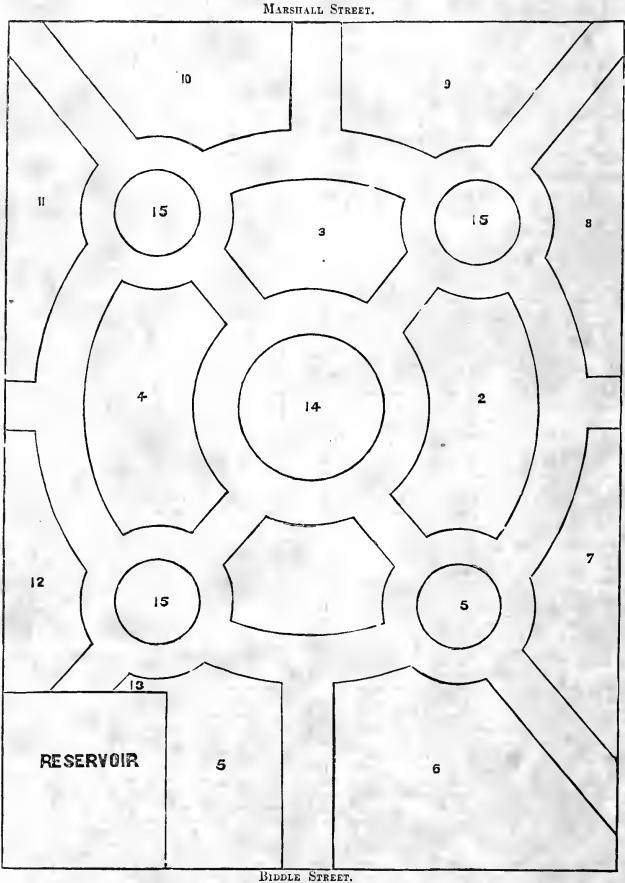
A farmer in Beverly, last year, raised on two and a half acres of land 18,000 cabbages per acre, the nett receipt of which averaged him \$450. Another farmer, in Danvers, cultivated an acre of land with sage, and realized the handsome profit of \$400. The cultivation of the onion in this latter town gives employment to many hands, and is the source of large profits.

Other examples might be cited to illustrate the importance of adapting crops to the markets, such as the production of the smaller fruits in the neighborhood of cities. It is not the crop on which the farmer himself sets the highest value that should be raised by him, but the crops he can produce at the least expense, and sell to the greatest profit.

Some farmers are fearful of loss, if they diverge from the beaten track. They go on, therefore, cultivating the same products, and often on the same fields, as did their fathers. Other farmers seem to entertain the opinion that unless they raise the heavier products—corn, and potatoes, and grain, and hay—they are no longer farmers, but a sort of market gardeners.

But away with such idle fears and foolish notions! Let our farmers study their true interests. Let them not stand still while others are going ahead. Let them be up and doing something to supply the wants of the towns and cities in their vicinity; and not the necessities only, but the tastes also. Let them raise flowers, even, if it will pay a profit! Why not? The taste for flowers is an innocent and rational one; why should it not be gratified?

There are many articles not yet cultivated to any extent among us, that may doubtless be raised to advantage. For example, some vegetable product, such as the castor oil bean, might be introduced and raised, to afford an oil for a domestic light, or for mechanical purposes. Whale oil cannot be produced fast enough to supply the demand. Some substitute, drawn from mother earth, will doubtless be soon introduced. Sunflower seed might, perhaps, be found to answer. But we must leave the subject for the present, hoping soon to resume it.—*Plough, Loom and Anvil.*



Horticultural and Floricultural.

List of Trees and Shrubs in Marshall Square, West Chester, Pa., as in Sections of Engraving opposite.

SECTION NO. 1.

Betula Alba,
Magnolia Frazeri,
Acer Rubrum,
Acer Pseudoplatanus,
Liriodendron Tulipifera,
Acer Nigrum,
Æsculus Hippocastanum,
Cupressus Thuoides,
Cytisus Laburnum,
Chionanthus Virginica,
Acer Macrophyllum,
Larix Americana,
Liquidambar Styraciflua,
Betula Populifolia,
Salix Babylonica,
Fraxinus Americana,
Acer Platanoides,
Acer Saccharinum,
Cydonia Japonica,
Cornus Florida,
Salisburia Adiantifolia,
Pinus Sylvestris,
Æsculus Rubicunda,
Cedrus Libani,
Virgilia Lutea,
Shepherdia Argentea,

White Birch.
 Frazer's Magnolia.
 Red Maple.
 European Sycamore.
 Tulip Poplar.
 Black Maple.
 English Horse Chestnut.
 White Cedar.
 English Laburnum.
 American Fringe Tree.
 Oregon Maple.
 Black Larch.
 Sweet Gum.
 Poplar Leaved Birch.
 Weeping Willow.
 White Ash.
 Norway Maple.
 Sugar Maple.
 Japan Quince.
 American Dogwood.
 Japan Glorio Tree.
 Scotch Pine.
 Red Flowered H. Chestnut.
 Cedar of Lebanon.
 Yellow Virgilia.
 Buffalo Berry.

SECTION NO. 2

Abies Nigra,
Liquidambar Styraciflua,
Magnolia Glauca,
Ostrya Virginica,
Acer Nigrum,
Magnolia Umbrella,
Fraxinus Epipactis,
Ulmus Triloba,
Acer Saccharinum,
Quercus Palustris,
Acer Ericocarpum,
Magnolia Acuminata,
Salix Babylonica,
Picea Pectinata,
Betula Papyracea,
Acer Rubrum,
Quercus Macrocarpa,
Tilia Glabra,
Magnolia Macrophylla,
Cornus Florida,
Betula Nigra,
Fraxinus Excelsior,
Acer Negundo,
Pyrus Sorbus,
Salix Variegata,
Taxus Hibernica,

Black Spruce.
 Sweet Gum.
 Swamp Magnolia.
 Hop Hornbeam.
 Black Maple.
 Umbrella Magnolia.
 Winged Ash.
 Papaw.
 Sugar Maple.
 Pin Oak.
 Silver Maple.
 Cucumber Magnolia.
 Weeping Willow.
 Silver Fir.
 Paper Birch.
 Red Maple.
 Mossy Cup Oak.
 American Linden.
 Long Leaved Magnolia.
 American Dogwood.
 Black Birch.
 European Ash.
 Ash Leaved Maple.
 Service Berry.
 Variegated Leaved Willow.
 Irish Yew.

SECTION NO. 3.

Æsculus Rubicunda,
Larix Americana,
Pyrus Spectabilis,
Magnolia Cordata,
Acer Platanoides,
Pinus Douglasii,
Acer Pseudoplatanus,
Fraxinus Americana,
Paulownia Imperialis,
Æsculus Flava,
Acer Nigrum,
Betula Excelsa,
Pinus Sylvestris,
Salix Babylonica,
Liriodendron Tulipifera,
Quercus Alba,
Celtis Occidentalis,
Cornus Florida,
Taxodium Distichum,
Magnolia Umbrella,
Acer Rubrum,
Cupressus Thuoides,
Populus Alba,

Red Flowered H. Chestnut.
 Black Larch.
 Chinese Flowering Apple.
 Heart Leaved Magnolia
 Norway Maple.
 California Pine.
 European Sycamore.
 White Ash.
 Paulownia.
 Yellow Flowered H. Chestnut.
 Black Maple.
 Tall Birch.
 Scotch Pine.
 Weeping Willow.
 Tulip Poplar.
 White Oak.
 Nettle Tree.
 Dog Wood.
 Bald Cypress.
 Umbrella Tree.
 Red Maple.
 White Cedar.
 Silver Leaved Poplar.

Pinus Excelsa,
Syringa Vulgaris,

Nepal Pine.
 Lilac.

SECTION NO. 4.

Liquidambar Styraciflua,
Betula Nigra,
Cornus Florida,
Magnolia Conspicua,
Tilia Glabra,
Acer Nigrum,
Fraxinus Ornus,
Æsculus Flava,
Acer Rubrum,
Picea Pectinata,
Salix Babylonica,
Magnolia Acuminata,
Acer Ericocarpum,
Fraxinus Epipactis,
Acer Saccharinum,
 " Negundo,
Quercus Corria,
Magnolia Frazeri,
Fraxinus Excelsior,
Abies Nigra,
Ulmus Suberosa,
Pinus Pinaster,
Abies Rubra,
Chionanthus Virginica,

Sweet Gum.
 Black Birch.
 Dogwood.
 Chinese Magnolia,
 American Linden.
 Black Maple.
 Flowering Ash.
 Yellow Flowering H. Chestnut.
 Red Maple.
 Silver Fir.
 Weeping Willow.
 Cucumber Tree.
 Silver Maple.
 Winged Ash.
 Sugar Maple.
 Ash Leaved Maple.
 Turkey Oak.
 Frazer's Magnolia.
 European Ash.
 Black Spruce.
 Cork Elm.
 Cluster Pine.
 Red Spruce.
 White Fringe.

SECTION NO. 5.

Eucalyptus Atropurpurea,
Tamarix Gallica,
Pinus Sylvestris,
 " Austriaca,
Laurus Sassafras,
Rhamnus Catharticus,
Prunus Borealis,
Pyrus Aucuparia,
Boxus Sempervirens,
Maclura Aurantiaca,
Gordonia Pubescens,
Cerasus Mahaleb,
Picea Pectinata,
Stephylea Trifolia,
Taxus Canadensis,
Populus Alba,

Burning Bush.
 French Tamarisk.
 Scotch Pine.
 Austrian Pine.
 Sassafras.
 Purging Buckthorn.
 Choke Cherry.
 Mountain Ash.
 Tree Box.
 Osage Orange.
 Franklinia.
 Perfumed Cherry.
 Silver Fir.
 Bladder Nut.
 American Yew.
 Abele Tree.

SECTION NO. 6.

Laurus Sassafras,
Pyrus Americana,
Gordonia Pubescens,
Populus Alba,
Æsculus Hippocastanum,
Robinia Pseudacacia,
Buxus Sempervirens,
Larix Europæa,
Acer Ericocarpum,
Ilex Opaca,
Taxodium Distichum,
Maclura Aurantiaca,
Alnus Glatiosa,
Tamarix Gallica,
Picea Pectinata,
Stephylea Trifolia,
Colutea Arborescens,
Ulmus Americana,
Juniperus Virginiana,
Betula Lenta,
Acer Striatum,
Eucalyptus Atropurpurea,
Cerasus Mahaleb,
Quercus Lyrata,
Liriodendron Tulipifera,
Ptelea Trifoliata,
Ailanthus Glandulosa,
Abies Excelsa,
Cedrus Deodara,
Magnolia Purpurea,
Rhus Cotinus,
Taxus Baccata,
Populus Lævigata,
Fraxinus Salicifolia,

Sassafras.
 American Mountain Ash.
 Franklinia.
 Abele Tree.
 English Horse Chestnut.
 Locust.
 Box Tree.
 White Larch.
 Silver Maple.
 American Holly.
 Bald Cypress.
 Osage Orange.
 American Alder.
 French Tamarisk.
 Silver Fir.
 Bladder Nut.
 Bladder Scuta.
 American Elm.
 Red Cedar.
 Sweet Birch.
 Mooswood.
 Burning Bush.
 Perfumed Cherry.
 Over Cup Oak.
 Tulip Poplar.
 Shubby Trefoil.
 Tree of Heaven.
 Norway Fir.
 Deodar Cedar.
 Purple Magnolia.
 American Fringe Tree.
 English Yew.
 Smooth Poplar.
 Willow Leaved Ash.

SECTION NO. 7.

Nyssa Multiflora,
Cerasus Scrotina,
Abies Canadensis,
Quercus Falcata,

Sour Gum.
 Wild Cherry.
 Hemlock Spruce.
 Spanish Oak.

Acer Nigrum,
Fagus Purpurea,
Magnolia Acuminata,
Populus Tremuloides,
Platanus Occidentalis,
Vraxinus Ornus,
Quercus Robur,
Populus Grandidentata,
Tilia Argentea,
Fraxinus Salicifolia,
Thuja Orientalis,
Pinus Variabilis,
Pinus Rigida,
Stuartia Malachodendron,

SECTION No. 8.

Uvaria Triloba,
Quercus Heterophylla,
Acer Negundo,
Fraxinus Pendula,
Fagus Sylvatica,
Platanus Occidentalis,
Magnolia Frazeri,
Salix Annularis,
Quercus Phellos,
Halesia Diptera,
Pinus Strobus,
Magnolia Glauca,
Pinus Inops,
Picea Pinsapo,
Populus Heterophylla,

SECTION

Rhamnus Catharticus,
Quercus Rubra,
Acer Ericocarpum,
Ulmus Americana,
Staphylea Trifolia,
Quercus Nigra,
Populus Tremuloides,
Acer Negundo,
Quercus Coccinea,
Rhus Typhina,
Betula Lenta,

SECTION

Pyrus Coronaria,
Rhus Typhina,
Robinia Pseudacacia,
Liriodendron Tulipifera,
Ulmus Latifolia,
Quercus Tinctoria,
" Montana,
Larix Europæa,
Betula Alba,
Paulownia Imperialis,

SECTION

Ilex Opaca,
Pinus Strobus,
Fraxinus Pendula,
" Sambucifolia,
Juniperus Virginiana,
Platanus Orientalis,
Fagus Ferruginea,
Quercus Prinus,
Salix annularis,
Halesia Diptera,
Cerasus Serotina,
Acer Striatum,
Nyssa Multiflora,
Populus Atriplicia,
Zanthoxylum Fraxineum,
Thuja Orientalis,

SECTION

Tilia Heterophylla,
Fraxinus Juglandifolia,
Gymnocladus Canadensis,
Acer Nigrum,
Quercus Imbricaria,
" Coccinea,
" Castanea,
Robinia Pseudacacia,
Halesia Tetraptera,
Fraxinus Sambucifolia,
Abies Canadensis,
Andromeda Arborea,
Juniperus Virginiana,

Black Maple.
Purple Beech.
Cucumber Magnolia.
Quaking Aspen.
Buttonwood.
Flowering Ash.
English Oak.
Large Toothed Aspen.
Silver Leaved Linden.
Willow Leaved Ash.
Chinese Arbor Vitæ.
Two and Three Leaved Pine.
Three Leaved Pine.
Stuartia.

Papaw.
Bartram Oak.
Ash Leaved Maple.
Weeping Ash.
European Beech.
Buttonwood.
Frazer's Magnolia.
Ring Leaved Willow.
Willow Oak.
Two Winged Halesia.
White Pine.
Swamp Magnolia.
Jersey Pine.
Mount Atlas Cedar.
Various Leaved Poplar.

Purging Buckthorn.
Red Oak.
Silver Maple.
American Elm.
Bladder Nut.
Black Jack.
Quaking Aspen.
Ash Leaved Maple.
Scarlet Oak.
Staghorn Sumach.
Sweet Birch.

Crab Apple.
Staghorn Sumach.
Locust.
Tulip Poplar.
Broad Leaved Elm.
Black Oak.
Rock Chestnut Oak.
European Larch.
White Birch.
Paulownia.

American Holly.
White Pine.
Weeping Ash.
Black Ash.
Red Cedar.
Oriental Buttonwood.
White Beech.
Chesnut White Oak.
Ring Leaved Willow.
Two Winged Halesia.
Wild Cherry.
Moosewood.
Sour Gum.
New Abele Tree.
Tooth Ache Tree.
Chinese Arbor Vitæ.

Various Leaved Linden.
Walnut Leaved Ash.
Kentucky Coffee Tree.
Black Maple.
Laurel Oak.
Scarlet Oak.
Chestnut Oak.
Locust.
Silver Bell.
Black Ash.
Hemlock Spruce.
Tree Andromeda.
Red Cedar.

Kalmia Latifolia,
Fraxinus Quadrangulata,
Hibiscus Syriacus,
Laurel.
Blue Ash:
Common Althæa.

SECTION No. 13.

2 Rhododendron Maximum, Mountain Laurel.
SECTION No. 14.

In the centre of this circle, and near the centre of the Square, is a *Magnolia Acuminata*, a magnificent and tall growing tree, and one of the noblest of our native forest; having wide-spreading, horizontal branches. At right angles from it, and at equal distances, along the outer edge of the circle, are our native Balm of Gilead and American Judas Tree, eight of them, planted alternately. In each of the four smaller circles, marked 15, is *Abies Excelsa*, "Norway Spruce Fir." The whole occupying $5\frac{1}{2}$ acres.

Public Square at West Chester, Pa.

With the view of inducing others of our inland towns, to take early measures to appropriate a few acres for the purposes of a public square, we embrace the opportunity to inform our readers, not what may be done, or what ought to be done, but what *has been* done in West Chester. Marshall Square, containing $5\frac{1}{2}$ acres, and laying on the north eastern section of the borough, was more than four years ago, appropriated by the borough authorities to the purposes of a Public Square, by the name of *Marshall Square*, in commemoration of the "exemplary character and scientific labors of Humphrey Marshall, whose botanic garden and residence was a few miles west of the borough. The design in the annexed engraving was arranged at the suggestion of, and the accompanying list of trees and shrubs, selected by three of our most eminent botanists, all residing at this place, Dr. Wm. Darlington, David Townsend and Joshua Hoopes. They were furnished from the extensive nursery grounds of Paschall Morris & Co., of West Chester, and the planting also attended to by them. They are all now growing, and many of them of considerable size, and it is believed furnish the largest, and best collection of choice trees and shrubs, for public pleasure grounds, in the State out of Philadelphia.* The taste for ornamental planting, public and private parks, and arboretums is decidedly on the increase. Rail Road lines completed, and others projecting, will soon traverse every portion of the State. New towns and villages are springing up out of the native forests, and while land is comparatively cheap, and every corner is yet unoccupied with the remorseless demands of trade and commerce, we should hope the appropriation of a space for a public square, in all our new, and many of our old settled towns, may not be forgotten. We should be willing, indeed that no act of incorporation for a new town or borough, should be granted by our Legislature without a provision requiring something of this kind. Future generations, at least, would thank them for it, in the increased health, comforts, and attractions, which invariably accompany these "lungs or breathing places" of densely populated towns and cities. The wise foresight of the Founder of Philadelphia in reserving

grounds for the Public Squares which are now its chief ornaments, is well worthy of imitation throughout the State. Independent of the increased value for residences of adjacent property, their exceeding beauty, and advantage in respect to health; there is also, we think, a high moral influence of no mean importance on the population of a large city, exerted by these open spaces, tastefully laid out and interspersed with fine trees and shrubbery. Hyde Parke, in London, consists of 800 acres. Regents Park of 336, with its Royal Botanic and Zoological Garden, the latter of 20 acres. Fifty thousand people, of all classes, of a fine afternoon, often resort to these parks for health, recreation or pleasure, and the extent of their beneficial influence can hardly be estimated.

In addition to her public square already planted, West Chester, with a population of 3000 inhabitants, is supplied throughout with pure spring water, thrown up to the reservoir, in one corner of the square, and which is the highest ground in the Borough. The streets and public and private buildings are lighted with gas. It contains a new *Court House*, costing near \$60,000, with six majestic cast iron columns of the corinthian order, in front, with open space all round it, planted with trees; a *Bank*, of pure white marble, with pillars of the Doric order, a *Horticultural Hall*, costing \$6000, in the Norman style, the second only in the Union, built by a Horticultural Society for Horticultural purposes, a *Cabinet* of natural science, containing the best collections in the State, out of Philadelphia; a *Jail*, built within a few years, of substantial construction, and the first for solitary confinement, of any interior county in the State or country, and seven large buildings for public worship, including a large Catholic chapel just erecting. The site of the Borough is on elevated ground, nearly 500 feet above tide-water, and overlooking one of the most beautiful and best cultivated agricultural districts in the Union. We have already one Railroad connecting with the Columbia Railroad, and a GROWING ATTACHMENT to Philadelphia, now progressing to completion, in the shape of a *Direct Railroad*, which will bring us within twenty-six miles of it, and less than one hour apart, and which it is expected will be *reciprocated* by many of its citizens, and business men, adopting West Chester, as their permanent residence, so soon as it is completed. In addition to the above, West Chester is celebrated for the excellence of her schools. In addition to several small ones, it contains three large Boarding schools, all well filled and flourishing. That of A. Bolmar is widely and favorably known over the Union, many of our public men having been educated under his care, and his scholars coming, many of them, from the Southern States, Mexico, and the West Indies. His building is large and imposing, and in the general management of the school, system of thorough instruction, conveniences and comforts

in and out of doors for the students, its grounds well planted with fine evergreen and Deciduous trees, some of large size, and in its large and well kept garden, is acknowledged to be the best private establishment in the United States. There is attached to it a farm of over 100 acres of excellent land. The fine herd of Durham cows, and other superior stock, the Farm buildings, cow house, conveniences for boiling food for stock, and the neat and successful management of the Farm, shall be adverted to at another time.

We had intended only to speak, in this article, of the *Public Square* at West Chester, but these other matters have unintentionally leaked out, and as they are generally secrets known only to a few, we let them go forth, and are willing to compare notes with any other town in Pennsylvania of twice the size.

*There are 238 trees and shrubs in the Square, comprising about 160 distinct species.

The following account of the successful removal of large trees, and of a kind too, more than usually difficult to transplant, even when small, is extracted from a recent number of Hovey's Magazine. As it has been done, and at a comparatively small expense for trees "30 to 40 feet high," and with a variety generally deficient in much fibrous root, we consider the success, in this case, the most remarkable we have heard of in this country.

Dear Sir:—The accompanying shellbarks—well ripened; as you will find them—grew, this season, upon a tree which my brother and myself transplanted twenty-one months ago, i.e., in January, 1851. The tree was moved, at the same time with three others, a distance of two miles, by what is called the *frozen-ball* method of transplanting. It is now in a fine healthy condition, and, with the others,—all of which are over thirty feet, and one of them forty feet, in height,—serves at once for ornament and shade. Upon our new place, they produce a fine effect in taking off and relieving the inevitable rawness of a recent settlement.

Thinking that a simple statement of these facts might encourage others to do likewise, I have written these few lines. Knowing—as no one better does than you—the great difficulty of transplanting our hard-wooded forest trees, particularly the oak and several species of the hickory, you will concede that our experiment has been eminently successful. The expense of transplanting did not exceed twelve dollars per tree.

Do not regard this on my part as a piece of boasting, but simply as a word of encouragement to those who are compelled to locate themselves and their household gods upon a naked spot of earth. The statement, you perceive, is of what *has been* done, not what *may be* done. What has *actually* transpired, it seems to me, is worth a great deal more to your readers than speculations in regard to what is *possible to be done!*

Truly your friend,

GEORGE JAKES.

Worcester, October 20th, 1852.

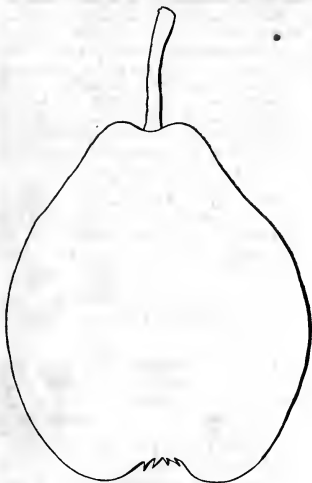


Fig. 1.

Fig. 1. Glout Moreeau. (Gloo. Morso:) Flemish variety, fruit rather large, varying form, but usually obtuse oval, and tapering towards the crown, surface green, becoming pale greenish yellow when ripe, stalk moderately stout, an inch or more long, and somewhat sunk in a small regular cavity; calyx large, usually with open divisions, set in a moderately deep basin. Flesh white, fine grained, and smooth in texture, buttery, very melting, with a rich sugary flavor without acid. Ripe in December.

We have fruited this variety this season, on Quince stock, and there can be no two opinions as to its being of the *very finest quality*. It makes a beautiful pyramid on that stock, is a very vigorous grower, and we have found an early and prolific bearer, and altogether one of the most desirable varieties. It is easily recognized by its pale, ash colored bark. It is said not to be so fine on Pear stock.

Fig. 2. Winter Nelis. This is a Flemish Pear, and was originated about twenty years since, by M. Nelis, of Mecklin; size medium, roundish obovate, often slightly pyriform, with a neck small and short, surface yellowish green, much russeted, stalk an inch and a quarter long, bent, cavity narrow, calyx, stiff, short basin, shallow. Flesh yellowish white, fine grained, buttery, very melting, rich, sweet or slightly vinous, perfumed, aromatic; in perfection in December, and keeps

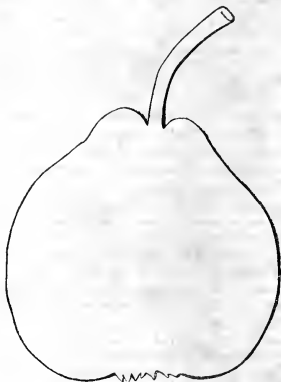


Fig. 2.

till the middle of January. This is also one of the very best of pears, and has no superior. It or the preceding might be preferred, according as the taste is slightly vinous or sugary flavor predominated. Downing says it occupies the same rank among winter Pears, as the Seekle among autumnal varieties. It will not do so well on Quince without double working, but when so treated produces finely. We had about a dozen Pears this season on a double worked tree, about five feet high, which were larger and finer specimens, than any we saw at the different exhibitions. The tree is of rather slender, straggling growth, with somewhat pendent branches.

We hope the meeting at Harrisburg on the 18th, to establish a State Pomological Society, will not be forgotten, and that there may be a full representation of Pomologists from different parts of the State. Pennsylvania contains, we believe, as fine seedling Fruits as any other State. These have been too long overlooked, and require the concerted action of a State Society, to bring properly before the public. The regular notice of the time and place of meeting was published in our last month's number.

In the account of the Bucks County Exhibition in last number, 1500 visitors should read 15,000.

Hawley Apple, Canada Red and Northern Spy.

DISCUSSIONS AT POMOLOGICAL CONGRESS.

WATTS, of Rochester, N. Y. I would propose the Hawley Apple, for trial, and call on Mr. Barry for his opinion.

Mr. BARRY, of New York. It is very highly esteemed, and I think worthy to be placed on the list for trial. It is productive, the tree is a good grower, and the quality is very good, though perhaps not first-rate.

Mr. HOVEY, of Massachusetts. From the specimens I have seen, I should class it among the very best apples we have. It is tender and refreshing, with an agreeable mixture of acid and sweet.

Col. HODGE, of New York. I think very well of this apple, and have never heard any thing disparaging said in relation to it.

Mr. HOOKER, of New York. I have known it for some years, and there is but one opinion expressed in our vicinity, with regard to it. It is considered first-rate.

Mr. J. J. THOMAS, of New York. I have known this apple a great many years, growing on old and young trees, on light and heavy soils, and the fruit is uniformly good and fair.

The vote being taken on Mr. Watts' motion, it was decided that the Hawley apple be admitted in the list of those promising well.

Mr. WATTS, of Rochester, N. Y. I propose the *Canada Red*, which is the Massachusetts Nonsuch, for general cultivation.

Mr. J. J. THOMAS, of New York. It has been widely cultivated, and I think it almost worthy of it. It has proved good in Ohio, and in New York, but whether or not far south I am unable to say.

Mr. WATTS, of Rochester, N. Y. At Rochester it is considered one of our best Western growing apples, and is particularly fine as a desert fruit. (Mr. Watts here presented a painting of the apple beautifully colored.)

Mr. ROBERT PARSONS, of Long Island. On Long Island, we think it is one of the best we have.

Mr. BARRY, of New York. It has been tried a long while and is an excellent apple.

Mr. WALKER, of Massachusetts. All I have heard has been favorable to it. It is very excellent; but overbears itself.

Mr. GOODALE, of Maine. It is well known in our markets, and is almost uniformly spotted, and is the last fruit we should want there.

Mr. DOWNING, of New York. I am to do that this is the case through the State of Connecticut.

Mr. HOOKER, of New York. In Western New York three-fourths of the crop have been worthless, but under good cultivation it is excellent.

The motion was amended so as to read that it be recommended for general cultivation, in certain localities, and then unanimously adopted.

Mr. SAUL, of New York. I would suggest the Northern Spy as worthy of trial.

Col HODGE, of New York. There is but one opinion in regard to that apple with us. We consider it one of the very best winter varieties. It has been said to be spotted, but with us it is not so. I esteem it so highly that for two or three years, I have been planting out large orchards of it.

Mr. MILLER. It has been fruited in Pennsylvania, and has become knurley.

Mr. WALKER, of Massachusetts. It has not proved in the neighborhood of Boston what we expected of it. When I first saw it I thought it the best apple I had ever eaten, but now I think it suited only to cer-

tain localities. I hold it in the highest estimation, but think it wants the warm generous soil of Western New York.

Mr. GOODALE, of Maine. My father has it, and it is pretty fair.

Dr. JONES, of Ohio. It has with us all the reputation given it in regard to quality, though it is not so great a bearer as I supposed it to be.

Mr. WATTS, of Rochester, N. Y. One day previous to my coming from home, I went ten miles from Rochester, where there were twenty-three trees growing. I found the trees full of fruit about half-grown. It generally bears well, and is a thrifty grower.—Those that do not grow on the ends of the limbs of the tree, or where the sun cannot get at them, are often inferior. About Rochester they are commencing to cultivate it very extensively, and orchards in the vicinity of Lockport, have been all grafted with this fruit. They have been known ten or fifteen years with us, and the price farmers receive in market for them, is two dollars and a half per bushel—and they will sell sometimes for five dollars—in the spring some sent to New York, brought nine dollars. The reputation in Western New York is high, and if the gentlemen saw it growing they would be perfectly satisfied with it.

It was voted that it be recommended for general cultivation in certain localities.



For the Farm Journal.

Carolina Buckthorn.

Rhamnus Carolinianus; unarmed; leaves oval oblong, obscurely serrate, glabrous; umbels axillary; flowers perfect, pentandrous, petals minute, embracing the very short stamens; styles united to the summit; stigmas three; fruit globose, three seeded.

Native of the Carolinas, Georgia, Florida, and west of the Mississippi. This beautiful little tree is found

to be quite hardy in Pennsylvania; and the elegance of its foliage and fruit render it a very desirable ornament for country residences. The beautiful gloss of the leaves is not exceeded by any other plant within my knowledge. It exhibits its fruit, which is near the size of a pea, in a red dress for a few weeks; during this time it is quite showy; it then changes to a beautiful glossy black, presenting a very rich appearance, which it frequently retains until late in the winter. Sometimes a flock of robins will attack the fruit late in the autumn, and devour it in a day or two. In the autumn of 1851, the fruit of the tree above represented was quickly eaten by those birds. I counted forty at one time thus engaged, and concluded their taste differed much from my own, as to my palate it is very nauseous. This tree grows from 15 to 30 feet high, and in favorable soil and climate somewhat larger. I obtained the above fourteen or fifteen years ago, at Bartram's Garden, on the Schuylkill near Philadelphia; it is now about fifteen feet high.

I have another species, the *Rhamnus Catharticus*, which, though less beautiful, is much esteemed north and east of us for making hedges. It is also medicinal, and is used in the arts.

JOSHUA HOOPES.

West Chester.

[The annexed engraving is from a daguerreotype, which we had taken, with the view of bringing a very beautiful tree more into notice. We have often admired it, standing in the arboretum of our friend Joshua Hoopes, with its branches bending with the weight of fruit. This arboretum, by the way, is well worth visiting, and contains in little more than half an acre, nearly 200 varieties of trees and shrubs, which have been collected by him and planted within the last twenty years. Many of them are rare here, and the collection is one of much interest to the Botanist.]

Cure for Ros. -Bugs.

A subscriber wishes to know if any one can suggest a method of preventing the yearly incursions of the rose-bug, and having heard considerable complaint among our neighbors at having their cucumbers, grapes and other fruit destroyed by these insects, I will suggest a remedy.—Plant in the centre of your garden a few damask rose-bushes, and they will never light on anything else. We have a large garden with almost every kind of fruit, vines, shrubbery and flowers, with several kinds of roses, and in the centre we have four bunches of damask rose-bushes, and I never saw in the whole garden a rose-bug on anything but the damask rose. When they are in blossom, I go into the garden once a day with a pan of hot water, and shake the bugs from these roses into the water, and get about a pint at one time; this I practice for a few days, and then they will disappear.—[*Boston Cultivator.*]

Keeping Apples.

Mr. Pell, of Ulster county, the celebrated exporter of apples to Europe, recommends that apples, after

having been carefully hand picked in baskets, should be laid on a floor, by hand, without pouring from the baskets, until they are fifteen to eighteen inches deep, and left to dry and season three weeks; when again carefully packed in clean barrels, they may be kept, without rotting, any reasonable length of time, and safely sent to any part of Europe or the East Indies. The plan of drying and seasoning in the air, before barreling, prevailed generally some years ago, although, now-a-days, it is mostly discontinued, and thought useless. We are disposed to think well of this process when it becomes important to keep apples safely till next spring to send to foreign countries, for we have always observed that on opening a barrel a few days after being put up, in ever so dry weather, that the moisture often stands in drops over whole surfaces, and although loose barrels will allow it mostly to evaporate, yet where they come in contact the two surfaces retain it and cause rot.

The carrying of apples in a common wagon, either before or after barreling, is injurious—they should be moved on springs or sleds. The least abrasion of the skin, or crushing of the cell of the pulp containing the juice, allows fermentation and decomposition, and the consequent decay of the whole mass.

Apples will not freeze until at a temperature of from 5 to 10 degrees below the freezing point of water, and it is beneficial to keep them as cool as possible, even down to 30 degrees. Apples inclosed in a water-tight cask, may be left in a cold loft all winter without further care, and will be sound in the spring and perfectly fresh.—[*Genesee Farmer.*]

State Herd Book.

With the view of facilitating the formation of a State Herd Book, as suggested by one of the stock committees at the late Fair, and to accommodate Farmers and Breeders, we are willing to devote a page of the Farm Journal, at the close of the reading matter in each number, to registering Pedigrees at the price of 50 cents each.

Every number of the Journal will hereafter contain its own index, so that they can be readily referred to, at each separate issue, and when the vol. is closed, an index of stock will also accompany. As our Journal will from time to time be illustrated with portraits of the best animals of the State, the whole will we think, when bound up, make just such a Herd Book as is wanted, and probably much cheaper, and quite as complete as any plan that can be proposed. If the owners of fine animals approve this plan, and send us their pedigrees, we shall commence the publication in our next number. The sooner it is commenced the better. At first, we may find it necessary to make up an extra sheet of a few pages, but after being once fairly posted up, a page or two of the Journal monthly, we think will be sufficient. In England, we understand that a Herd Book for Devons' has also been published.

Subscribers to Farm Journal in Philadelphia, in addition to W. B. Zieber, South 3rd st., can be supplied with the work by A. M. Spangler, at C. B. Rogers' Seed Store, 29 Market st., who will also receive subscriptions.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The proceedings of the Pennsylvania Horticultural Society were received just as we were locking up the form for the press. We had withheld space till the very latest moment, but owing to their length and the late hour at which they were received, we are compelled to defer their publication until our next number.

We call attention to the advertisement of Adrian Cornell, of pure Suffolk pigs. This is a valuable breed, of good form, and very easy feeding. The stock of A. Cornell has been obtained from the best sources, and we are assured is well worthy of attention of those wishing to improve their breeds.

Original Communications.

For the Farm Journal.

Noctua Agrotis Clandestina. Cut-worm.



This insect belongs to an old family (*Noctuidæ*) of nocturnal Lepidoptera or night-flying moths; but more recently, it and a number of others of similar character, habits and appearance, have been grouped together and named Agrotidians (*Agrotididæ*) or rustic dart moths: perhaps, from being found principally in the fields, and some of them manifesting a darting motion in their flight. I am persuaded the moth is very little known as being identified with the larva or caterpillar which produces it, and whose history and extermination is the chief concern of the agriculturalist and the vegetable grower. The larva is better known as the "cut-worm" so destructive to all young succulent plants, and the very terror of the kitchen gardener. The illustration at the head of this article represents the moth of the corn cut-worm. It does not confine itself to any particular vegetable however: all that are succulent being alike relished by this indiscriminate devourer; but if left to its own choice, it seems to prefer the young corn when it is only a few inches high.

They sometimes make their appearance in great numbers and at rather irregular periods, and together with others belonging to the same group, commit great ravages to the young corn, beans, cabbages, &c. They usually bury themselves in the soil three or four inches from the root of the plant during the day, and come up at night, or in cloudy days, and cut the tender vegetables off near the surface of the soil, and after having devoured a portion, if not all of it, they return again to their former hiding place as

soon as daylight or the sun appears. It is said, that in sixty bushels of mould taken from a field where the larva of several species (allied to the one we are considering) prevailed, there were twenty-three bushels of the caterpillars.*

It appears that when first disclosed from the egg, they subsist on the various grasses—and on the approach of cold frosty weather they go down into the ground and remain inactive, and appear in the spring again about half grown, which is the time they exhibit their destructive qualities. Dr. Melsheimer, says "the moths as well as the larva" of this species, "vary much in the depth of their color, from a pale ash to an obscure brown. The ordinary spots of the upper wings of the moth are always connected by a blackish line; where the color is of the deepest shade these spots are scarcely visible; but when it is lighter they are very obvious."†

This moth is very abundant in Pennsylvania as well as in the Eastern States, from the beginning of June until the middle of September, and sometimes when the weather is warm they may be found near the end of the month, and even later. The transformation of the pupa occurs usually in July, and the fore-part of September, according to the season. The forewings are generally of a dark ash color, with faint traces of wavy transverse bands; the hind wings are a dirty whitish color, darkened towards the margin. It expands from one inch and a half to one inch and three-quarters. In a state of rest the wings overlap each other flat upon the back. During the day it lies hid in chinks and crevices of fences, walls or barks of trees, and appears at night with hosts of others, and is attracted by burning lamps, candles or any other luminous body. The caterpillar is usually smooth, naked, and of a dark color, of a cylindrical form, tapering a little at each end, and is provided with sixteen legs. Among the various remedies recommended for their destruction or to prevent their ravages, is soaking the various kinds of seeds in copperas water, or rolling them in lime or ashes; but as the cut-worm does not attack the seeds, this can have but little effect, except perhaps to accelerate the germination and growth of the plant. Fall ploughing the land intended to be planted in corn, whereby the cut worms are thrown up and devoured by birds, or exposed to the cold, seems also of doubtful utility, although I have found many of them in places of exposure, dead in the spring. The only certain mode is to go to work, where it is known they have commenced cutting the young corn or vegetables and dig them up and destroy them by hand, a description of which is given by Mr. Asahel Foote in the "Albany Cultivator" and 17th vol. of the "New England Farmer." S. S. R.

*Koller's Treatise, P. 94, &c.

†Harris' Treatise, P. 326.

MR. EDITOR:—

For the Farm Journal.

A fact of small importance to some, but perhaps of advantage to others of your readers, came under my observation a few days since. While husking out my corn, one of my hands, who wished to get a few ears of the eight rowed kind for seed, ascertained by finding two ears on one stalk, that one of them was of the eight rowed, and the other of the twelve rowed variety; and by farther observation I found that out of thirty stalks, each bearing two good full grown ears, thirteen of them were of a mixture, the lower ear being invariably the fullest, containing generally twelve rows and the upper one eight rows. This corn was formerly of the common yellow eight rowed variety, but now after eight years cultivation on the farm, it has run into ears of ten, twelve and fourteen rows. There are many farmers in this section, who think that the eight row corn is hardier and of better quality, and with the idea that "like begets like," are careful to select none but that kind for planting; but the above fact renders it altogether superfluous. As to its being of better quality, it is my opinion that it has no advantage over larger ears of the same kind of corn.

C. M.

Wyoming Valley, Pa. 1852.

[Selected from an English work, for the "Farm Journal," by John M. Harlan, Ercildoun, Chester County, Pa.]

Case of a broken leg, that had been amputated by Professor John Tindall.

"In 1828, I was sent for to see a three year old heifer, that had broken her leg above the fetlock joint. This case had been attended by another person for ten days previously, who amputated the leg. When I attended, the wound was in a gangrenous state, and I applied spirits of wine, camphor, and the tincture of myrrh, with poultices made of wheaten flour, yeast and honey, to the stump; and in the course of twelve days, the wound was brought to a good consistence. The only thing to be considered now was, how the animal was to walk and graze. I therefore got an artificial leg made of cork, and a leathern boot, to lace above the carpal joint, to keep the leg in a proper state, and I soon had the satisfaction of seeing my patient walk and feed with little inconvenience. I give this case to show the necessity, when an animal has fractured a limb, to get a skilful person to set it, and it will in most cases, unite in about thirty days."

J. M. H.

East Fallowfield, Chester co., Pa.

We have received from our friend William Elliot a copy of the Brownsville Free Press, containing the account of the first annual Agricultural and Horticultural Exhibition of the Jefferson township, Fayette county Fair. It says:—

The Jefferson Township, Fayette County, Agricultural Society, held their first annual Exhibition at Brownsville, on the 26th and 27th of October. The exhibition of the different kinds of stock was very fine, and surpassed the most sanguine expectations of the Society, as to number and quality. The display made in the Horticultural department showed that we are becoming acquainted with the importance of this branch of Domestic Industry.

The display made in the Domestic Manufacturing department, showed well for the manufacturing Boroughs of Brownsville and Bridgeport—owing to the day being unfavorable, it was not so extensive as it otherwise would have been, had the day been more propitious; nevertheless great credit is due to those presenting articles for exhibition, and more particularly so for the taste, skill and industry of mothers, wives, and daughters of the surrounding country.

We observe by the list of premiums, that the managers of this enterprising Society have endeavored to enlist the whole feeling and interest of their community, by taking a wide swath and embracing a large number of articles not usually entered on such occasions. In this they have done right, and the great success of this their first exhibition is no doubt attributable to such a course. In addition to the customary display of articles, we find premiums have been awarded for Ladies' Riding Horses, and light Harness horses, Maltese Jacks, Merino, Saxony, French Merino, and other Merino sheep, specimens of several of the improved breeds of Fowls, articles of wool and cotton manufacture, quilts, coverlets, carpets, sewing silk-paintings, Daguerreotypes, bee-hives and bees, wrapping-paper, drugs, perfumery, penmanship, &c.; "also, a large variety of agricultural implements, grain drills, grain reapers, clover and timothy sowers cutting boxes, carriages, buggies, &c., and an extensive list of our most approved varieties of Fruits. We observe also, a premium of \$100 to R. Buffington, a small boy, for a steamboat, and a "premium to Mr. Miller for vegetable eggs." These last eclipse any thing we have been able to bring out, as yet, at our Chester County Horticultural or Industrial Exhibitions. There perhaps will be some excuse for us, in the first article, as our nearest water, the Brandywine creek, is two miles off, and so shallow as to make navigation decidedly unsafe; but what are "vegetable eggs?" Have our friends out there really got to growing eggs on bushes for a field crop? if so, the fowls may well exclaim—"their occupation's gone;" or are they what we call here, egg plants, that are intended?

We congratulate the Society on their success thus far, and hope the influence of their effort will stimulate other counties around them in the same cause.

CARROTS FOR HORSES.—The stable keepers are beginning to find that these vegetables form a cheap and nutritious food to mix with grain for their horses. It is better to give a working horse a peck of carrots and four quarts of oats or corn meal a day, than to give him six quarts of meal.

A TABLE FOR THE USE OF THE CATTLE KEEPER.

Showing at one view when Forty Weeks will expire, from any day throughout the year, saving much trouble to all persons for whom it has been calculated.

NAME OF THE COW.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1	8	1	8	1	6	2	1	1	8	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1
2	9	2	9	2	7	3	2	2	9	2	2	2	9	2	2	2	2	2	2	2	2	2	2	2
3	10	3	10	3	8	4	3	3	10	3	3	3	10	3	3	3	3	3	3	3	3	3	3	3
4	11	4	11	4	9	5	4	4	11	4	4	4	11	4	4	4	4	4	4	4	4	4	4	4
5	12	5	12	5	10	6	5	5	12	5	5	5	12	5	5	5	5	5	5	5	5	5	5	5
6	13	6	13	6	11	7	6	6	13	6	6	6	13	6	6	6	6	6	6	6	6	6	6	6
7	14	7	14	7	12	8	7	7	14	7	7	7	14	7	7	7	7	7	7	7	7	7	7	7
8	15	8	15	8	13	9	8	8	15	8	8	8	15	8	8	8	8	8	8	8	8	8	8	8
9	16	9	16	9	14	10	9	9	16	9	9	9	16	9	9	9	9	9	9	9	9	9	9	9
10	17	10	17	10	15	11	10	10	17	10	10	10	17	10	10	10	10	10	10	10	10	10	10	10
11	18	11	18	11	16	12	11	11	18	11	11	11	18	11	11	11	11	11	11	11	11	11	11	11
12	19	12	19	12	17	13	12	12	19	12	12	12	19	12	12	12	12	12	12	12	12	12	12	12
13	20	13	20	13	18	14	13	13	20	13	13	13	20	13	13	13	13	13	13	13	13	13	13	13
14	21	14	21	14	19	15	14	14	21	14	14	14	21	14	14	14	14	14	14	14	14	14	14	14
15	22	15	22	15	20	16	15	15	22	15	15	15	22	15	15	15	15	15	15	15	15	15	15	15
16	23	16	23	16	21	17	16	16	23	16	16	16	23	16	16	16	16	16	16	16	16	16	16	16
17	24	17	24	17	22	18	17	17	24	17	17	17	24	17	17	17	17	17	17	17	17	17	17	17
18	25	18	25	18	23	19	18	18	25	18	18	18	25	18	18	18	18	18	18	18	18	18	18	18
19	26	19	26	19	24	20	19	19	26	19	19	19	26	19	19	19	19	19	19	19	19	19	19	19
20	27	20	27	20	25	21	20	20	27	20	20	20	27	20	20	20	20	20	20	20	20	20	20	20
21	28	21	28	21	26	22	21	21	28	21	21	21	28	21	21	21	21	21	21	21	21	21	21	21
22	29	22	29	22	27	23	22	22	29	22	22	22	29	22	22	22	22	22	22	22	22	22	22	22
23	30	23	30	23	28	24	23	23	30	23	23	23	30	23	23	23	23	23	23	23	23	23	23	23
24	31	24	Dec.	1	29	25	24	24	31	24	24	24	31	24	24	24	24	24	24	24	24	24	24	24
25	Nov.	25	2	2	30	26	25	25	2	25	25	25	2	25	25	25	25	25	25	25	25	25	25	25
26	2	26	3	3	31	27	26	26	3	26	26	26	3	26	26	26	26	26	26	26	26	26	26	26
27	3	27	4	4	Jan.	28	27	27	4	27	27	27	4	27	27	27	27	27	27	27	27	27	27	27
28	4	28	5	5	2	29	28	28	5	28	28	28	5	28	28	28	28	28	28	28	28	28	28	28
29	5	29	6	6	3	30	29	29	6	29	29	29	6	29	29	29	29	29	29	29	29	29	29	29
30	6	30	7	7	4	31	30	30	7	30	30	30	7	30	30	30	30	30	30	30	30	30	30	30
31	7	31	5	5	31	31	31	31	7	31	31	31	7	31	31	31	31	31	31	31	31	31	31	31

Selected from an English work, for the "Farm Journal," by John M. Harlan, Ercildown, Chester county, Pa.

Fattening Swine—Commence Early.

By the last census it appears there were over thirty millions of swine in the United States, and that they out-numbered the sheep by about ten millions. This shows the value of this product, proving pork an important item of domestic consumption. It is, in the country especially, the stand-by when other meats fail, and will ever retain its place, where long-keeping and hearty, strength sustaining food is desired.

We have before urged the importance of an early commencement of the process of fattening, and now repeat that it is advisable, for the reason that articles of food can be made use of which would otherwise be wasted, and that mild weather is much more favorable to taking on flesh than cold.

At this season, most farmers have quantities of autumn apples, summer squashes, early potatoes, &c., which would perish or deteriorate sadly by keeping, but are now of considerable value—well worth saving, at least—as food for swine. Boiled or steamed and mixed with meal, they are well relished, and for a commencement in fattening, answer as well as can be desired. Where apples and potatoes are both used, when boiled in a large kettle, it is a good plan to put the apples in first—three or four bushels of apples to one of potatoes, and cover with the latter—well washed, of course. Then fill with water, and when sufficiently cooked, add enough meal to make a thick pudding-like mass. The meal will be cooked by thus mixing while hot. Some farmers grind up oats and peas, oats and corn, oats and barley, or shrunken wheat for this purpose.

An Orleans county farmer informs us of a mode of fattening which he has practiced with much success, not differing materially from that above recommended. He commences early, having the pen open into a small yard adjoining, that the hogs may have exercise, and get at the ground at pleasure. He begins feeding boiled apples, pumpkins, carrots, potatoes, &c., mixing the same with some light mill-feed, which he is careful to measure so that he may gradually increase its richness to the last, when he feeds nothing but corn meal pudding. He is also particular to let the mush stand a half day or so, until the saccharine fermentation commences—which is undoubtedly the most proper stage for feeding. He never fails in making the first quality of pork, and a good deal of it.

We remarked that mild weather was most favorable for fattening. Food is the fuel for keeping up animal heat, and the less need of expenditure in this respect, the more rapidly will flesh be accumulated. Their comfort should be studied as a matter of economy, for a discontented, restive animal, however much he may consume, will never fatten rapidly. Their sleeping places should be dry and well littered,—and well ventilated, for pure air is of importance to everything that breathes it.

As to the amount of food to be given daily, we think it important to supply all fattening animals with just as much as they will consume without wasting, either by leaving, or by not fully digesting. The *Boston Cultivator* in remarking upon this subject, illustrates it as follows: "A certain amount of food is daily required by the animal to support life, or supply the natural waste of the body—for the process of life is one of consumption and decomposition. The accumulation of fat and extra flesh is only a deposit of superfluous nutriment, which not being required for the system at one time, is laid by for future emergencies. Now, if no more food is given daily than is sufficient to supply the natural waste, no surplus flesh or fat can be formed. If, for instance, a farmer has

ten bushels of meal to be fed to each animal, and it should be fed in so small quantities that it barely supplies the natural waste, the whole of the food would be consumed without the animal gaining a single pound in weight. But if the time of feeding had been shortened one-half, and the same amount of food had been eaten, the animals would have been able to lay by a surplus equal to the amount which half the food was capable of producing."

The same authority advises feeding Indian corn before it is fully hardened, as it is then more readily and fully digested, and both corn and cob are eaten, as well as the stalks if given to swine while yet green. The plant in this stage contains much sugar, and this is a most concentrated form of nutriment.

To conclude, we would say, commence early, use cooked food—increasing the richness thereof as the process goes on, feed regularly and fully, attend to the comfort of your porkers, and do not forget the manure heap, and no doubt large profits will result from this branch of farming economy.—[*Ohio Farmer*.

Guano on Potatoes.

Last spring I planted four acres of potatoes on a two year old sod; the soil was a very light gravelly loam, well calculated to raise *sound* potatoes, but as it had been hard run, and never manured, it could not be expected to produce a large crop. I plowed the land deep and well, as early as the weather would permit, letting it lie till the time of planting—May 10th. It was then dragged, and on two acres 600 lbs. of Peruvian guano were sown broadcast. The land was then furrowed out in rows about three feet and potatoes planted in the rows, from twelve to fourteen inches between the sets. On the remaining two acres no guano, or manure of any kind, was applied, though treated exactly alike in every other respect.

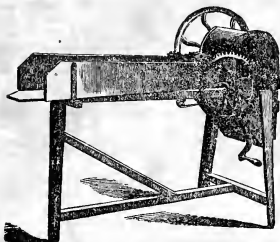
As soon as the plants were up there was a decided difference visible. The guanoed ones having a richer, darker hue, which they maintained throughout the summer. In the fall, when the unguanoed potatoes were quite ripe and the vines dead, the guanoed ones were growing luxuriantly, the vines covering the whole space between the rows.

The potatoes were dug the last week in October, and accurately measured. On the unguanoed two acres, there was 238 bushels; and on the two acres guanoed, 410 bushels, making a difference in favor of the guano of 86 bu. per acre. All the potatoes are perfectly sound and good, but the guanoed ones are much the largest, with scarcely a small one among them. The guano cost in New York two and a half cents per pound; freight, breaking the lumps, sifting, and sowing it, would make its cost on the land three cents per pound, or \$9 per acre. The 86 extra bushels of potatoes will more than pay for the guano, &c., and leave a good profit from the investment.

As regards the best mode of application, I may state that in another field this year I had an acre of potatoes, part of which were guanoed, as on the other two acres, by sowing broadcast, planting the potatoes in hills. On part of the acre the guano was applied *in the hill*, placing the guano immediately over the potatoes, separating them with a little soil, otherwise it would injure the sett. The potatoes thus treated were *much better* than where the guano was sown broadcast. Four rows left unguanoed were not more than half as good as where guano was applied.

I consider guano a most powerful and valuable ma-

nure, though whether it will pay as well to apply it to wheat, corn, or other grain crops, as it has in this instance to potatoes, I cannot say. I have sown some on wheat this fall and can already see how far it extended, the difference being very perceptible.—H. C. IVES.—Rochester, N. Y., 1852.—[*Genesee Farmer*.



Webb's Patent Hay and Straw Cutter.

The above is an engraving of a new and useful improvement in Straw Cutters, patented in 1850, and not as yet widely introduced. We consider it, for several reasons, the best machine for this purpose now in the market. It combines *simplicity* of arrangement with great efficiency, cutting two to three bushels in a minute, with hand power. The length of cut with this machine is about three-fourths of an inch, having two knives; those with three knives the cut is half an inch. Its construction is simply on the shear principle, a straight knife cutting on a curved edge, with adjusting and set screws, to regulate the approach of the knives to the curved edge. There is no intricate rigging to break or get out of order, and the whole machine is so simple, and at the same time efficient, as to warrant its being recommended with confidence. It is self feeding, and the price is \$16 for the two knives, and \$20 for the three. Several alterations have been made in the original machine, making it much more perfect and easily managed. Persons who purchased any of the first manufacture in eastern Pennsylvania, are requested to return them, and they will be exchanged for the improved pattern at Paschall Morris & Co.'s Agricultural Warehouse, West Chester, who can furnish them at the above prices retail, and at reduced rates to dealers.

WORK FOR THE MONTH.

Farm.

Stock require particular attention. Give sufficient shelter, some variety in their food, free and convenient access to water, and have a lump of rock salt in the yard for them to go to, which is much better and more economical than salting at stated times. Cut up straw, hay and corn fodder; the saving by this will more than pay for a machine, in one winter. Keep cows at night in warm, well ventilated stables, well furnished with litter, and turn out in fine weather. Use the cattle card daily, particularly on heifers and young stock; feed once a day, at least, with roots, cabbages, &c., and a little meal; milk before feeding, to avoid

taste of turnips, &c., in milk and butter; accustom calves to the halter, by being regularly tied up at night in stalls; give extra food to working oxen; have corn ground in cob for feeding; attend to manure in yard as directed last month; protect all tools and vehicles from weather; haul lime, ashes, and such other fertilizers as may be wanted the coming season. Sheep should have good shedding, and be fed, besides good hay, with oats daily, and also roots, sufficient to keep them in good thriving condition. There is no gain at lambing time from sheep poorly kept through winter; they should also have access to water and salt at their pleasure. At leisure times, and in wet weather, make plain gates to substitute for bars all over the farm; there is great economy in this. Give attention to poultry. Let them have a warm house to go to, with some refuse meat, grain, sand and ashes always at hand. A few well kept will pay better than a large number running at large and uncared for.

Fruit Orchard.

But little is to be said, further than directions for last month, under this head. Remove all long grass and rubbish from trees, which attract mice. Bank up earth as before recommended. Arrange plan of orchard and fruit garden for spring planting; select at this leisure season, from fruit books and other sources, what varieties will probably be wanted; provide fencing materials, and have them ready for early use; cut down worn-out and decayed apple trees; provide stakes and tallies for trees; plant the orchard on paper in winter, at leisure, and thus expedite business in spring; spread lime over old orchards; moderate pruning may be attended to in this month; dig in Guano or short manure, to promote vigorous growth.

Vegetable Garden.

Attend to directions of last month; keep a close watch on frames, so as not to force into growth or injure by exposure; attend to composts, and procure materials for forcing beds in spring; repair sash, and make mats of straw for covering in cold nights; provide a full supply of bean poles, pea sticks, &c.; procure what gardening tools may be wanted, and anticipate the working season.

Flower Garden.

If the hints given out the previous month have been attended to, there will be little to do this month in the flower garden. Protection should be given at once to all tender roses and shrubs requiring it. Plants in windows should be carefully watched, and avoid too frequent watering. A good watering when necessary, is much better than constant wetting. That pest the Green Fly, can be kept under by occasionally syringing or immersing in tobacco water, made by steeping tobacco stems in water for twenty four hours.

Orange and Lemon trees in cellar, should have fresh air admitted when weather is open; water only

when dry. Plants in cold frame should have air every fine day. They are very liable to be injured by excess of moisture.

OYSTER SHELLS FOR FRUIT TREES.—A correspondent writes to the Germantown (Pa.) Telegraph, as follows:

One of the most effectual applications I have ever made to fruit trees in an old and barren situation, is a compost in which finely broken oyster shells were the principal ingredient. The shells have generally a large per centage of saline matter attaching to them, in a fresh state, with some animal matter and much lime. By breaking them and mixing them with wood ashes, and spreading it thickly around old trees, and almost immediate and decided improvement will take place.

YOUNG STOCK.—These should not be left entirely without grain during winter. The raw materials for the formation of muscles, bones, &c., are not contained in sufficient quantities in the long provender used for winter feeding.—[Working Farmer.]

Review of the Markets.

PHILADELPHIA, December 23, 1852.

FRUIT.—There is a good demand for foreign fruit, and store sales are making to a fair extent at full rates. Apples and peaches are in demand, and sell freely at previous quotations. **FLOUR AND MEAL.**—The Africa's advices imparted a better feeling to the market for Flour, and holders have realized an advance of 12½a18½c per bbl. since the close of last week; some 11,000a12,000 bbls. having been taken by shippers and speculators at \$5 12½a5 18½, and since at \$2 25a 5 31½ for mixed and straight brands, including some selected lots at \$5 37½; fancy brands at \$5 56½a5 62½; and extra at \$5 62½a5 75 per bbl. Rye Flour is steady, with further small sales at \$4 25 per bbl. Corn Meal is also stationary, and 500a600 bbls Penn'a Meal sold at \$3 50 per bbl. **GRAIN.**—Receipts continue moderate, and with an active demand for Wheat, principally for milling, prices are 113a114c per bu. better; about 20,000 bu. have been taken at 113a117c for fair to prime Penn'a and Southern reds, including some small lots of mixed at 117c, and pure white at 120c; the latter is scarce, and generally held higher. Rye is in request, with small receipts; and sales of Penn'a at 85a86c. Corn in steady demand, and the receipts, some 22,000a25,000 bu. found buyers at 64c for good Southern yellow, and 60c for white, mostly at the former rate. Oats continue dull, with limited arrivals, and sales of Southern at 40a42c, as in quality, and Penn'a at 44c. Wool is active, and further large sales have been made at improved rates. Among the transactions we are advised of is a sale of 260,000 lbs fine fleece on private terms, said to be at a higher rate than any previous sale in the market.

CATTLE MARKET.—The offerings at Washington Drove Yard comprised 1400 head of Beef Cattle, 319 Cows and Calves, 900 Hogs, and 5000 Sheep and Lambs. Prices. The demand for Beef Cattle is limited, but prices have undergone no change. Sales were made at \$6 to \$8 50 per 100 lbs. Good milch Cows ranged from \$18 to \$36, and dry Cows \$8 to \$14. In Hogs the sales were larger than those of the preceding week, but prices of live hogs are unchanged. Killed hogs are arriving more freely. Sales at \$7 50 a \$7 75. Prices of Sheep are steady at \$1 50 to \$3 50, and Lambs at \$1 50 to \$4 50 each, as in quality.

CULTURE OF CRANBERRY VINES.

The variety cultivated mostly in England are hardy and prolific.

They can be raised on upland on rather moist loam—but do the best on low, damp or moist Meadow Land, with a little sand put around the plant.

They may be planted out 1½ to 2 feet apart each way.

Two feet apart, it will take 10,000 plants to the acre; if on low ground it should be pared, plowed, or burnt over to take out the grass or weeds, and cultivated for one or two years, until they cover the ground. The yield after that is from 150 to 250 bushels per acre. They are usually gathered with a Cranberry Rake, to be found in any Agricultural Store.

It is not necessary to flow Meadows in order to make them productive.

PRICES.—Under 500, fifty cents per 100; under 5,000, forty cents per 100; over 10,000, thirty cents per 100. For sale by

F. TROWBRIDGE.

New Haven, Conn.

Jan. 1853.

SUFFOLK PIGS FOR SALE.

THE Subscriber has for sale a few pairs of Suffolk pigs, warranted pure, 12 weeks old, from his premium Boar Lord Rodnar the 2d, and his fine sows Lady Suffolk, and White pink. The sire and dams of the above pigs, were bred by L. G. Morris, of Mount Fordham, West Chester county, New York, from his imported boar Lord Rodnar. For further information, address

ADRIAN CORNELL,

Newtown, Bucks co. Pa.

Jan. 1853.

CHOICE POULTRY FOR SALE,

COMPRISING the following varieties, viz:—

Cochin China and Canton Fowls; Buff, Brown, Black, and White-Shanghaes; Chittagongs, or Gray Shanghaes; also Sumatra Games.

The subscriber offers for sale Domestic Poultry of the above varieties, warranted true to their name, and purely bred—equal in every respect to any stock in the country. Orders for the same, addressed to the subscriber, will receive prompt attention.

CHARLES SAMPSON,

West Roxbury, Mass.

Jan. 1853. 3m]

J. & D. FELLEBAUM.

Manufacturers of all kinds of Steam Engines and Boilers, Slide and Hand Lathes, Mill and Press Screws of all sizes, &c. West Chestnut st., Lancaster, Pa.

We also furnish castings of the best materials, and at the most reasonable prices. Having had fifteen years practical experience in the manufacture of various kinds of machinery and iron work, we are able to warrant our work to give satisfaction to all who may favor us with their patronage. [June, 1852.]

ALDERNEY AND IMPROVED SHORT HORN CATTLE.

THREE thorough bred Alderney BULLS, from nine to eleven months old, raised from the choicest imported stock. Also, two thorough bred young Short Horn BULLS, ten months old, raised on the farm of T. P. Remington, near Philadelphia, and for sale by AARON CLEMENT, Agent for the purchase and sale of improved stock, Cedar street, above ninth street, Philadelphia. February 2d, 1852.

AGRICULTURAL WAREHOUSE AND SEED STORE.

The subscribers, in addition to their extensive Nursery and Green-House establishments, have established an Agricultural Warehouse and Seed Store, near the Horticultural Hall, West Chester, and are prepared to fill orders by wholesale and retail, of all kinds of improved Agricultural and Horticultural implements, vegetable and flower seeds, &c. Country storekeepers supplied with any of the following, with reasonable discount to suit again:—

Garden, Field and Flower Seeds; Horse Powers and Threshers; Wheat Drills and Seed Planters; Ploughs, Harrows and Cultivators; Hay and Straw Cutters; Grain Fan, and Corn Shellers; Vegetable, or Root Cutters; Hand Grain Mills, Clover Shellers, Horse Rakes, Churns of various patterns, Grindstones and Improved Hangings; Hay, Straw, and Manure Forks; Ox Yokes and Bows; Patent Bow Pins, Ox Trace and Log and Cow Chains; Cross-cut and other Saws; Spades, Shovels, Hoes and Rakes; Ox Muzzles and Bull Rings; Post Diggers and Crow Bars; Wheel Barrows; Grain Cradles; Scythes and Scythstones; Grubbing Hoes and Picks; Post Augers, Drawing Knives, Axes, Broad Axes and Hatchets; Grain Bags; Grain Measures; Garden Trowels and Weeding Forks; Cast Iron Chairs and Settees; do. Hat and Umbrella Stands; Garden Watering Pots; Hyacinth and Bulb Glasses; Pruning and Budding Knives; Wire Flower Trainers; do. Stands, Bee Hives, Pruning Saws and Chisels; Grass and Grain Sickles; Rose Shears and Twig Cutters; Flower Scissors; Butter Prints, Bowls and Ladles; Folding Ladders; Screw Wrenches, Pincers and Gimblets; Rat and Mole Traps; Cattle Cards and Horse Brushes; Curry Combs; Horse Lancets, Ox Knobs; Nest Eggs; Hoe and Fork Handles; Hay and Corn Knives; Garden Reels; Tree Scrapers; Cow Bells; Family Press; Pick Nic Boxes; Potato Diggers and Pullers; Whiffle Trees; Caterpillar Brushes; Fruit Pickers; Border Knives; Guano; Plaster; Poudrette; Bonedust; Lime, &c.

PASCHALL MORRIS & Co.,

Nursery, Seedsmen and Florists.

West Chester, Pa.

Orders by mail promptly attended to.
SUPER PHOSPHATE OF LIME.

Prepared under the supervision of Professor Mapes for sale by the ton or smaller quantity, at the Agricultural Warehouse and Seed Store, West Chester, Pa. Also, No. 1, Peruvian Guano.

PASCHALL MORRIS, & Co.

10,000 PEACH TREES.

Also fine Dwarf Pears, well branched, many of them having fruited the present season; also Evergreen and Deciduous Trees and Shrubbery in great variety.

Nurserymen and Dealers supplied with Black Spruce, American Arbor Vita, Balm of Gilead, White Spruce,—Hemlock, from 4 to 12 inches in height, at \$30 per 1000, well packed in crates, and delivered in Philadelphia. Also, Sugar Maple, White Ash, Birch, American Larch and Elm, from 18 inches to 4 feet, of handsome shape, and delivered in Philadelphia in good condition a \$10 per 100.

ROCK SALT.

Rock Salt in large lumps, for salting cattle. This article can be placed in the open field, and is not affected by the weather.

PASCHALL MORRIS, Co.

HAY, STRAW AND FODDER CUTTERS.

Webb's, Hovey's, Emery's, Rice's, Potts', Catchpole's, and other Straw and Fodder Cutters and Crush-

ers; also Hick's Portable Cider Mills, which will meke from 5 to 10 barrels per day. For sale by

PASCHALL MORRIS, & Co.,

Agricultural Warehouse and Seed Store,
West Chester, Pa.

FRUIT & ORNAMENTAL TREES & SHRUBBERY.



The subscribers offer for sale the present fall, at their Nursery, Garden & Green-house Establishment, West Chester, Pa., a large and select assortment of the different kinds of FRUIT TREES which they offer by wholesale or retail, at prices public price, viz: Apple, Pear, Peach, Plum, and Cherry Trees, Apricot, Nectarines, Figs, Filberts, English Walnuts, Strawberries, Raspberries, Gooseberries, Currants in great variety, Quinces, Almonds, hardy and tender Grape Vines. Also a fine collection of Dwarf Pears in Quince adapted for immediate bearing, and embracing some 25 or 30 varieties. Some of them now in fruit.

Also Evergreen and Ornamental Trees and Shrubs, both of native and foreign growth, of all the most desirable kinds for our climate. Norway Fir, Balm of Gilead, Austrian and Scotch Pine, Lebanon and Cedar Cedars, Cryptomeria, Japanese, Chili Pine, Himalayan—prince, several varieties of Box, Arbor Vita, Hollies, nine varieties of Junipers, English and Irish Yew. Also a large collection of hardy roses and green house plants. Balloons roots, Tulips and Hyacinths, imported Phloxes, Verbenas, Dahlias, embracing 40 varieties, imported the present season. English double Holly-hocks, very choice chrysanthemums, &c., together with all other articles usually found in similar well conducted establishments.

Orders by mail promptly attended to, and trees and plants carefully packed, and forwarded as directed. Catalogues furnished on application.
PASCHALL MORRIS & Co.
Sept. Nursery, Seedsmen & Florists, West Chester, Pa.

FRUIT & ORNAMENTAL TREES.

ELLWANGER & BARRY desire to call the attention of Nurserymen, dealers and planters to the immense stock of Trees now on their grounds embracing 1 fruit Trees of every description, viz: Standard Apples 1 year, Plums, Quinces, Peaches, &c., on free stocks for pyramidal Pear Trees, on quince stocks about 100,000, embracing every fine variety that can be so worked, 2 year old, trees low branched, vigorous and beautiful. Dwarf and Pyramidal Cherries on mahaleb stocks five one, two and three year old trees; well branched and finely formed. Dwarf Apple trees, on Paradise and douglas stocks beautiful 2 year old trees with heads for immediate bearing, besides vigorous yearlings. Gooseberries, large Laneshire sorts, strong plants for immediate bearing.

Currants including the Cherry, Victorin, White Grape and many other new and fine sorts. See our catalogue. Raspberries, the new large fruited monthly, Fallot, &c., &c. A complete collection of all desirable varieties. Grapes, hardy native sorts, such as Isabella, Catawba and Clinton, strong two and three year old varieties of foreign grapes for vineries, strong thrifty plants in pots.

Strawberries of all desirable varieties. Rhubarb, a large stock of the best varieties in cultivation, and all other fruits in fruit.

The entire fruit department is under our own personal supervision. The best quality of stocks is used, and the most scrupulous attention given to ensure accuracy; we flatter ourselves that no Nursery collection can offer a stronger guarantee to purchasers in this respect. The stock is all grown on new free soil, and is healthy, well matured and hardy. We ask purchasers to examine it.

ORNAMENTAL.—Large trees for streets, parks, &c. Such as horse chest-nut, silver maple, Norway spruce, mountain ash, elm and tulip trees, in large quantities, cheap.

RARE ORNAMENTAL LAWN TREES, embracing the most novel, remarkable and beautiful trees, and shrubs both deciduous and evergreen that can be grown in our climate, for particular, we refer to the descriptive catalogue.

ROSES.—One of the best collections in the country, including the newest and best European varieties, selected by us last summer in person.

Bulbous Roots imported annually from Holland, can be supplied after 1st Sept.

DAHLIAS.—The new English and French prize varieties of 1851, besides fine older ones.

All articles packed in the best manner and forwarded to any part of the U. S. Canada or California. Orders strictly complied with in every particular. The following catalogue is sent gratis to all who apply and enclose stamps to cover postage which must be prepaid.

No. 1.—A Descriptive Catalogue of Fruits
No. 2.—" " Ornamental Trees, Shrubs &c.
No. 3.—A catalogue of Dahlias, Fuchsias, Chrysanthemums and

budding plants

No. 4.—A wholesale catalogue, for Nurserymen and others, who wish to purchase in bulk.

Postage on Nos. 1 & 2—5-10 miles or under 3 cts; 500 to 1500 m. 6 cts.
" 3 & 4—500 " " " 2 cts.

MOUNT HOPE NURSERIES,

Sept 1, 1852

Rochester, N. Y.

PUMPS, FIRE-ENGINES, CASE IRON FOUNTAINS, &c., &c.

The subscriber manufactures double-acting, lift and force Pumps, (perpendicular and horizontal), of any size or capacity, which, from their simple construction are well calculated for Factories, Mines, Rail way Water Stations, Tanneries, Breweries, Irrigation, Hydrostatic establishments, or any other situation where water is required.

VILLAGE AND FACTORY FIRE ENGINES.

Having a double-acting force pump. They are light, easily handled and worked by few men.

Cistern and Well Pumps, for in or out doors.

Garden Engine, with a small size double acting lift and force pump. Arranged with or without action. They are so adjusted that one person can wheel them from place to place, and are well calculated for agricultural and horticultural purposes.

Ornamental cast iron fountains of various styles and prices.

Copper Riveted Hose of all sizes, Hose Couplings, Stop cocks, Lead and cast iron pipes, &c.

I am now ready to receive orders and build Steam Engines from 3 to 15 horse power, portable or stationary, horizontal or perpendicular. I shall build them in as simple a style as possible, combined with strength and sure of getting at every part, and adapted for any purpose required. When an engine is required for raising water of any amount, I can adjust the pumps in a compact form easily got at, and disconnected from the engine, when not required for pumping. In many situations steam is the most profitable mode of raising water, as the engine can be used for other purposes to advantage.

Also prepared to receive orders or give information upon lathes, planers, presses, shafting, pulleys, and machinist tools in general, from the firm of Messrs O. Saw & Co., Meriden, Conn.

Any communications by mail will have immediate attention.

G. B. FARNHAM, 31 Cliff st., near Fulton, N. Y.

AGRICULTURAL IMPLEMENT WAREHOUSE.

No. 65, Chesnut street, Philadelphia.

The subscriber offers for sale, Hay, Straw and Cornstalk cutters; Cornstalk Cutters and Grinders; Corn Cob Crushers and Grinders; Corn Shellers and Separators; Root Cutters of the most approved patterns, warranted to cut, by hand power, from one to two bushels of roots per minute; Bamborough's celebrated Grain Fans; Grain Cradles Revolving Hay Rakes self-sharpening Plows, various patterns; plain point Plows of various patterns; Subsoil Plows, Harrows, Cultivators or Hoe Harrows, chains, Seed Drills, Corn Planters, Corn Shellers, Scythes, Grass Ho, ks, Spades, Shovels, Rakes, Hoes, Hay and Manure Forks, &c., &c.

Orders received for any and every Agricultural Implement now in use, which will be furnished at manufacturer's prices.

D. LANDRETH,

August, 1822.]

No. 65, Chesnut st., Philad.

TO FARMERS!

LANPHEAR & JEFFERIES.

RESPECTFULLY invite the attention of Farmers and others to their Establishment for the manufacture of Farming Implements and especially to their celebrated

IMPROVED GRAIN FANS,

which they confidently assert will do more work in a shorter space of time, and with less labor, than any other Fan now in use. These Fans, wherever introduced, have given complete satisfaction, and a large number of testimonials could be procured, testifying to their superior merits.

They also manufacture, to order, Agricultural Implements of various kinds: such as *Straw Cutters, Cultivators, Ploughs, Harrows, &c.*

Having had many years' experience in the best shops in the country, they are prepared to do work of a superior quality a little cheaper than any other establishment in the State. They warrant their work to be what it is represented. A warrant given with every Grain Fan, giving the purchaser the privilege of returning it, should it not do good and quick work.

They will deliver them, free of expense, any distance within fifty miles of the manufactory. Their Shop is at the junction of the Marietta and Columbia Turnpike, Lancaster, Pa., where they will be happy to have Farmers call and examine for themselves.

Price of Fans, No. 1, large size, - - - \$21.00

" " 2, small size, - - - 22.00

Several good and responsible Agents wanted in the Western and Middle part of Pennsylvania, to whom a fair percentage will be allowed. All orders addressed to Lanphear & Jefferies, Lancaster Pa., will meet with prompt attention. June 1-1f.

ALDERNEY AND IMPROVED SHORT HORN CATTLE.

THREE thorough bred Alderney BULLS, from nine to eleven months old, raised from the choicest imported stock. Also, two thorough bred young short horn Bulls, ten months old, raised on the farm of Mr T. P. Remington, near Philadelphia, and for sale by AARON CLEMENT, Agent for the purchase and sale of improved stock, Cedar street, above 9th street, Philadelphia. February 2d, 1852

IMPORTANT TO FARMERS!

THE farmers who make the most money are those who take advantage of all improvements in agricultural implements or stock, so as to receive in return for their labor as large a yield as possible. The truth of this assertion will be admitted by every one. The only question then, the farmer has to decide when about to purchase a new implement is, which is the best? To those in want of a Wind Mill or Grain Fan,

Bamborough's Improved Fanning Mill

is confidently offered as the very best article of the kind that can be had. Its advantages over all other Fans can be told in a few words, viz: it will do more and better work in less time and with less labor than any other description of fan ever offered to the public. In proof of this statement, I refer to the eight thousand farmers in the United States who have used my fans, and to the proceedings of the various State and county Agricultural Societies held within the last six years, at which my Fan was, in all cases, awarded the highest premiums over numerous competitors! A large number of silver medals and diplomas can be seen by calling at my shop.

The following is one of many similar letters almost daily received:

Lexington, Missouri, Nov. 24, 1851.

Mr. Bamborough—Dear sir: I see by the reports of the different Agricultural exhibitions that you have been getting more premiums and honors for your celebrated patent grain fan. And why should you not? You surely are justly entitled to any that were awarded you. In my opinion, the equal to your fan is no where to be found, much less its superior. The millers say to all the farmers who bring in their wheat "that it is not very clean; that they might get a mill like I got of you to clean their wheat for, we have no use for rolling screens or suut machines, for my grain cleaned on the mills I got of you. JOHN T. NICHOLAS.

P. S.—I am now making out a bill to send to you for a large number of your fans, as soon as the navigation opens. J. T. N.

Mills for sale, wholesale and retail. Different sizes and prices from 21 dollars, to 26, 28 and 30. I have been in the business 19 years and made and sold 8,500. Direct to me at Lancaster, Pa. Fans sent to any part of the United States.

JOHN BAMBOROUGH, Patentee.

Several trusty agents wanted to sell rights. Orders may also be sent to Trenton, New Jersey.

CAUTION—All persons are warned from trusting any person on account of the subscriber, unless he has a written order. J. B. July 14. tf. 33

TO FARMERS—SALINE FERTILIZER.

This preparation is designed to furnish the soil the various mineral or inorganic materials abstracted from it by plants in the process of vegetation.

It contains a large proportion of the salts of potash soda and ammonia, combined with Bi-Phosphate of Lime, Animal Charcoal and other fertilizing matter; the whole forming a highly concentrated manure.

In thus offering a new article to the attention of farmers, the relative value of which remains to be tested by experience, it is desired not to venture upon any assertions respecting it, calculated to excite expectations, which, perhaps, might not be realized; knowing, however, that the principal constituents of this compound have been proved to be highly valuable separately, it is confidently believed that their combination in proper proportions in the "Saline Fertilizer" will form an excellent manure.

DIRECTIONS FOR USE.

The Fertilizer should be applied at the rate of two barrels to the acre, and spread broad-cast on the surface.

If, on opening the barrels, the salts should be found adhering together in lumps, they should be broken, say with the back of a shovel, upon a floor or smooth surface, and, if convenient, a little good dry mould may be added, and well mixed before spreading.

For wheat or rye one barrel per acre may be used before sowing, and lightly harrowed in, and the other applied as a top dressing early in the spring, at the commencement of the first thaw.

Upon grass it should be sown broad-cast, and, if possible, when the ground is wet, or when there is a probability of rain, to dissolve the fertilizing salts: generally late in the fall or early in the spring, will be found to answer best.

Upon corn, it would perhaps be advisable to apply one barrel in the hill, and one broad-cast.

If added to the manure or compost pile, the Fertilizer will doubtless increase greatly the efficacy of the mixture.

The experience of Agriculturists will probably suggest other modes of employing it, as soon as they become satisfied of its utility. It should not, however, in any case be mixed with quick-lime which will cause a loss of ammonia, nor should it be buried deeper in the soil.

Price, \$2 20 per barrel.

Manufactured and for sale by

CARTER & SCATTERGOOD,

June, 1852]

Office, 84, Arch st., Philad.

SHANGHAE & COCHIN CHINA FOWLS

For Sale.

The subscriber has on hand a number of young Cochin China & Shanghai Fowls of the latest importation, which he will dispose of at fair prices on post paid application, addressed to

PHILIP HUNT;

West Phila., Chesnut st., 2nd door West of Pub. School House.

FARMERS! LOOK TO YOUR INTERESTS.

STILL GREATER IMPROVEMENTS IN GRAIN
DRILLS.
PRICE REDUCED TO SIXTY DOLLARS!



MOORE'S PATENT
SEED AND GRAIN PLANTER.

This Machine was Patented July 2, 1850, and has received the highest premium at all the Exhibitions where it has ever been contested; including New Castle County, Delaware, Agricultural Society, October 9th 1850; Philadelphia and Delaware County Agricultural Society, October 17th, 1850; Maryland State Agricultural Society, October 23d, 1850, and October 24th, 1851, and Michigan State Agricultural Society, September 25th, 1851.

THE ABOVE DRILL is not liable to get out of repair, is exceedingly simple in its construction, will sow point rows in all irregular shaped fields, and possesses superior advantages to all others in the ease and quickness with which it can be regulated to sow any desired quantity of Grain per Acre, while the draft upon the horses is twenty-five per cent. lighter, and consequently with the same labor, can seed one-fourth more ground per day than with most other machines now in use. The objection so common to Drilling Machines of becoming Choked if the seed is not perfectly cleaned, is entirely obviated in the Simple and Peculiar construction of this Drill, as white

caps and short straw will not interfere in the least with the regular distribution of the seed. It is warranted to distribute the seed evenly; to sow and quantity per acre commonly sown broadcast; to not cut or break the grains; to be well made with good materials and durable with proper care.

Having sold about 400 of the above Drills the past season, all of which met with the unqualified approbation of the purchasers; and after careful and thorough experiments, which have resulted in Still Greater Improvements, we now feel warranted in saying that Moore's Patent Seed and Grain Planter improved, is superior to any other machine for the purpose, now in the market.

Having made arrangements to furnish 1000 of the above Machines for sale the coming Season, we shall be prepared, at all times, to supply orders without delay.

All orders addressed to the undersigned will warrant prompt attention.

LEE, PEIRCE & LEE.

August, 1852.] Ercildown P. O., Chester Co., Pa.

MYERS' CHEMICAL ANIMAL MANURE.

That of offering to the public a Manure which comprises all that could be wished—its cheapness and surprising effects in producing larger crops in any kind of soil—is lasting and enduring qualities.

The subscriber offers this Manure to the public with a full knowledge of its powerful effects upon ground where used. This Manure must take its precedence above all others; its adaption to all kinds of soil, and every particle of fertilizing properties being preserved in the mode of manufacture, render it at once cheaper than any other manure used for all kinds of crops. Its effects are wonderful. A supply always on hand, WM. MYERS, Seventh Street near Germantown Road, Kensington, Phila.

READ THE FOLLOWING CERTIFICATES
GERMANTOWN, October 8, 1851.

To Mr. Wm. Myers—Sir—Having tried your 'Chemico-Animal Manure' upon potato ground, this season, I find it produce one-third more and larger potatoes than the best horse manure in the same ground. WM. K. COX.

The following additional certificate just received, speaks for itself. WOODBURY, N. J., 10th mo 20th, 1851.

I have used upward of 1000 bushels of WM. MYERS' ANIMAL MANURE, on corn, potatoes, turnips, melons, and some other crops during the present season, and am satisfied that it is an economical and powerful manure, for turnips, radishes, and other root crops—my experience has shown it to be especially valuable.

DAVID J. GRACOM.

SPRING FIELD FARM, Cecil County, Md.

Mr. Wm. Myers—Dear Sir—I measured with your 'Chemico-Animal

Manure about 38 acres of the poorest land on my farm, and put half in Oats, and the balance in Corn. Although it was got in quite late, and the Season very unfavorable for the Corn crop generally, yet notwithstanding, I can say that it is decidedly the best Corn I ever raised, although I have farmed for 20 years, and have had good Corn land, and Manured well, as I thought, in the old way. While my neighbors' Corn was quite yellow and leaves curled up with the drought, mine was green and growing rapidly; therefore, I consider it one of the most valuable manures I ever used, and shall take pleasure in recommending it to my neighbors and others.

Yours respectfully,

E. M. SEELY.

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HENRY SIDLE.

Dillsburg, April, 1852—U

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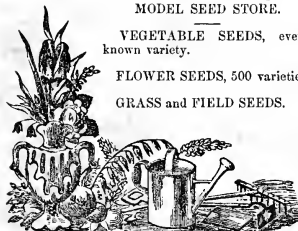
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C. B. ROGERS.

PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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Portable Grain Mills.

Now that horse-powers have become so common, we think a good and not too expensive portable mill for grinding and mixing grain for horses, cattle, hogs, &c., and which could be used on the barn floor, would find a ready sale. The one-tenth toll, and the loss of time of teams and men in going some miles, makes an item well worth saving. Such a machine might also embrace the making flour and meal for family use. If they are in use any where we should be glad to have a cut and description for the Farm Journal.

J. S. L. is received. A better plan would be to mow the weeds down after harvest, before they have gone to seed and exhausted the ground. By "sleeting time" the mischief is all done.

Analysis of Soils.

That the inorganic constituents of our cultivated crops as developed in their ash must be derived from the soil, and that where it is defective in these, a defective crop is the necessary result, are facts which, though not new, are only beginning to be fully appreciated by the generality of our farmers. As reasonable is it to expect a mechanic to manufacture his wares without giving him the materials of which they are composed, as to expect a crop of wheat, Indian corn or potatoes where the soil is destitute of phosphoric acid, potash, magnesia, and other elementary constituents which analysis has proved to enter largely into their composition. Agricultural chemistry has shown us what most of our cultivated crops are composed of, and all that is wanting to an enlightened system of cultivation, is for the practical farmer to make himself acquainted with the composition of his soil so as to adapt the one to the other, and thus be able to apply such food for plants in the shape of manures, and such only as are wanting, or may result from chemical combinations therein.

One invariable rotation of crops, the uniform application of the same manures, prevails in this district of country, and in most others through Pennsylvania. Barn-yard manure applied to the wheat crop in the fall of the year, after being exposed for nine or ten months to the weather, and an occasional dressing of lime and plaster are the three great specifics for all kinds of crops and all soils. That this system often results in large products of corn, oats, wheat, potatoes, &c., is an evidence of the natural fertility and absorbent power of the soil, and of the value of these materials, but it does not prove that their indiscriminate application, in the way they are used, is, in all cases, the most profitable one. Nothing is more common than to hear practical farmers differ in opinion as to the use of lime and plaster.

One has told us that after using the latter for several years, he had entirely abandoned it, never having observed the least benefit. Another, within a

short distance, has usually applied a small quantity to each hill of corn, and has observed the benefit, not only in that crop, but each successive one of oats, wheat, grass has indicated by its deep green and luxuriant growth, where each hill of corn had

The first concludes plaster is of no use, and so informs his friends and neighbors that he has tried it fairly, and it is money thrown away. All within his influence are thus discouraged from using plaster. His neighbor tells a different tale, shows its good effects, and plaster becomes a *panacea* for improving land. One of our best farmers, who has been in the habit for many years, of applying considerable quantities of both lime and plaster, tells us that on one occasion, where the plaster fell short of going over the entire field, leaving a whole land across it untouched, this part could be observed at a distance by its increased luxuriance over the rest, indicating there was an excess of sulphate of lime, already in the soil, and that more produced a positive injury. The same discrepancy is found to exist with respect to lime and barn-yard manure, little or no advantage often resulting from their application

cular crops. The different results in these cases, is owing to the variable composition of the soil, and we refer to them as an illustration of the importance of analysis—as indicating what is deficient, and enabling us to supply it. Because a certain manure has failed or succeeded under certain circumstances, is no more proof that it will do the same in every other soil and situation, than that because the Laplander can digest whale oil and tallow candles, the same articles are suitable food for residents of a tropical climate. The organic food of plants, constituting over 90 per cent., is derived chiefly from the atmosphere; the remainder, or inorganic constituents, solely from the soil, and these, although in such small proportions, are equally necessary with the others. The following tables, giving the composition of several of our cultivated crops, will be found useful:

	Indian Corn.	Wheat.	Wheat Straw.	Rye.	Oats.	Potatoes.	Tur-nips.	Hay.
Carbonic acid,	trace.	.....	.....	.....	.....	10.4	.....	.....
Sulphuric acid,	0.5	1.0	1.0	1.5	10.5	7.1	13.6	2.7
Phosphoric acid,	49.2	47.0	3.1	47.3	43.8	11.3	7.6	6.0
Chlorine,	0.5	0.6	0.6	.....	0.3	2.7	3.5	2.6
Lime,	0.1	2.9	8.5	2.9	4.9	1.5	13.6	22.9
Magnesia,	17.5	15.9	5.0	10.1	9.9	5.4	5.3	5.7
Potash,	23.2	29.5	7.2	32.8	27.2	61.5	42.0	18.2
Soda,	3.8	trace.	0.3	4.4	.....	trace.	5.2	2.3
Silica,	0.8	1.3	67.6	0.2	2.7	8.6	7.9	37.0
Iron,	0.1	trace.	1.0	0.8	0.4	0.5	1.3	1.7
Charcoal in ash, and loss,	4.5	2.4	5.7	.....	0.3	0.7	.....	.....
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The theory of rotation is founded on the fact that every kind of plant requires its specific food, the amount of which is of course diminished by the production of every subsequent crop of the same kind. Although analysis may sometimes fail of giving the exact proportions, it may be relied on safely for indicating the general character, what it has and what

it wants, so as to form the basis of improvement. We consider it thus far as certain as mathematics, and its great importance, to the skilful farmer, cannot be too highly estimated. Plants, like animals, seem to have their instincts for certain kinds of food, and differ in their powers of selection and assimilation; the ash of different varieties, never exhibiting, on analysis, the same composition. No substitutes will answer. Hay, for instance, exhausts the soil of silica, lime, potash. No application of soda, magnesia, or chlorine, which it contains in very small quantities, will supply this deficiency.

It does not seem to us necessary that farmers should qualify themselves to analyse their own soils. The practical part of farming is amply sufficient to occupy their whole time, without attention to the laboratory. An analysis will not often be required more than once, but we hold it to be indispensable to correct and profitable management, that they should, in all cases, know the constituents of their soil, before they can judge what fertilizers are wanting, or in what quantities they should be applied.

In Maryland, a State Chemist is employed on a fixed salary, to analyse soils without expense to the farmer. There has been no liberality of this kind, as yet, in Pennsylvania, but we hope there soon will be. We have heard there is an agricultural chemist in Philadelphia, of some experience in this way, but we do not at present know who he is or where to be found. If any of our readers have this information, we shall be obliged by hearing from them, as our farmers are making inquiries of us on this subject.

Cutting Corn-fodder.

Enos Smedley, of this county, and of many years' experience as a dairyman, informs us of his great success the present winter in keeping his cows on corn-fodder, cut and crushed by a horse-power and machine. His plan is to cut off a foot or eighteen inches of the butts before putting it through the machine. This is worked on the barn floor, with a one horse power, and the cut fodder discharged through a funnel into the entry below, contiguous to the cow stables. Here it is emptied into a large box made for the purpose, and holding about 34 bushel baskets full. This is well mixed up with an equal number of quarts of meal, and the whole slightly moistened. He has 34 cows fastened up in separate stalls, and one bushel, heaped up, is found sufficient for a cow at a feed and they are fed twice a day, eating it up clean. Under this management they are improving finely, and wintering as well as they usually do on the best hay.

One sheaf of fodder cut up, making two good feeds, is worth here, about three cents, making 21 cents per week. Sixteen quarts of meal per week for each cow is worth 32 cents. Total for keep of cows each, per week, 53 cents. This is cheap wintering, and a strong

illustration of the great advantages of cutting food for stock. Such evidence of what *has been done*, is worth pages of theory in convincing farmers of the great loss they sustain in feeding hay and fodder uncut. Not only will one-half or two-thirds in quantity be sufficient, but there is a great saving in respect to waste. Those of us who have been used to feeding cattle in barn-yards, out of cribs, know that not less than about one sheaf to each animal is a sufficient allowance, and that when either corn-fodder or hay is fed whole, a considerable portion is dragged out over the yard and lost.

Hay is now worth from \$18 to \$25 per ton, and by this plan of feeding corn-fodder, a saving of some tons and the price of several machines may be effected in one winter. We have found, in our own experience, that when corn-fodder is fed, merely cut, without crushing, a very considerable amount is left uneaten. The sharp and tough edges of the stalk do not admit of proper mastication, and, indeed, is apt to make sore mouths. The machine used by Enos Smedley is of Potts' patent. Urmy's patent is said to be able to cut and crush from sixty to one hundred bushels per hour. Our readers will find in another place an excellent article, from the Michigan Farmer, on sowing corn for fodder broad-cast or in drills. We have tried this ourselves, and found it a most valuable food, especially for cows and young stock. We consider it preferable to hay. When not allowed to go to ear, the stalks abound in rich saccharine matter, and by the experiments of William Webb, of Wilmington, Delaware, who manufactured sugar from it, it would appear to be equal in this particular, to the sugar cane.

Agricultural Societies.

One of the most cheering evidences of the progress of agricultural improvement in Pennsylvania, may be found in the very great increase in the number of these within two or three years past. In a large number of counties they have been established within that time, and have held spirited and satisfactory annual exhibitions. Where county associations have been found to be impracticable, we observe agricultural clubs, for local districts or townships have been formed, which promise to be highly useful. One of these latter has been lately organized in Tredyffrin township, in this county, through the public spirit of our friend, Dr. Walker. They meet at stated times, and have a room in a central location, supplied with agricultural periodicals and standard works on agriculture and horticulture, and propose forming a cabinet of specimens of newly introduced field and vegetable seeds for inspection and distribution among farmers. The interchange of views, and discussions on practical subjects, comparisons of modes of cultivation and general farm management which will necessarily result from such clubs, can but be highly

useful, and we hope to see them multiplied in different directions through the State. They answer an excellent purpose in the different townships as auxiliaries to county societies.

We are desirous to obtain a list of the various county agricultural societies in Pennsylvania, for publication in the Farm Journal. We think it important on several accounts, such a list should be made out. It will bring more fully to view the relative condition of agriculture in different sections, and the progress of improvement, and be valuable for reference in obtaining statistical information.

We should be much obliged if the secretaries or other persons who have the means of correct information, will forward us an account of their county society; the year it was established, the number of exhibitions which have been held, and a list of the president, secretaries and other officers.

Salt for our Domestic Animals.

BY LEVI BARTLETT, WARNER, N. H.

Farmers in the same neighborhood differ widely in their views upon the most common farm operations, such as the depth of ploughing; the width and angle of the furrow slice; the application of manures whether it should be spread upon the land before ploughing, or after this operation, &c., &c. It is less strange that they should entertain different opinions in regard to other rural matters, not so palpably visible. Thus, while one farmer uses many bushels of salt annually for his farm stock, another scouts the idea of its use in either large or small doses. Some farmers practice salting their hay at the rate of one bushel of salt per ton. Mr. Pell, of Ulster Co., N. Y., several years ago, gave, in some agricultural paper, an account of his method of curing hay; which was, to get it in very green, and sprinkle on it one bushel of salt to each ton of hay. This statement called out several farmers in reply; and one of them pronounced "his practice actually cruel" to thus compel his cattle to eat such a quantity of salt. Some farmers use but two, others four quarts to the ton of hay, while, perhaps, a very large majority use none upon their hay, at the time of storing it in their barns. Thus, practical farmers disagree. How are we to decide the question, whether cattle should be supplied with salt, or not? Reasoning from the instincts of our domestic animals, and the researches in animal physiology, I can come to no other conclusion than this: that the health and thrift of our farm stock, in many sections of the country, depend much upon a full supply of salt, and that the pecuniary interests of the farmer require that he should, in some form, afford this supply.

The Creator has given to man reasoning powers and speech, by which he can communicate his wants, his likes and dislikes, and orally express them. To animals he has given instinct, which guides them in the selection of their food, and, in a good degree, teaches them to avoid that which is hurtful or poisonous. The almost universal relish our domestic animals manifest for salt, indicates most clearly, I think, the necessity of their being supplied with it; and this desire for salt is not confined to our domestic animals alone. The salt *licks* of the west were formerly much frequented by the buffalo, elk, deer, and the huge mastodon and other animals, for th

purpose of obtaining salt, so necessary to their well being. Our cattle have not the use of an intelligible speech, but "actions sometimes speak plain as words," and the actions frequently manifested by cattle for salt cannot be misunderstood. They mean, give us salt; the cravings of nature require it, and most farmers believe the fact. Therefore, some good farmers always keep salt in troughs, under cover of a shed, where their cattle have access to it through the year. In such cases, it is probable the cattle just take what is necessary, no more, no less. Others give salt to their cattle, sheep, &c., once a week; whether this is as often as is necessary, (especially in the early part of the pasturing season, when the grass is tender and succulent,) admits of some doubt. Besides, they may eat too much at such times for their health, and the weaker ones may not obtain their share.

Chemical analysis long ago taught us that the bones of animals were chiefly formed of phosphate of lime; but it was not known till the publication of a work on animal physiology, by Professor Liebig, some three or four years ago, that the chloride of sodium, (common salt,) and phosphate of soda were invariably found in the blood, and that the phosphate of potash and the chloride of potassium were of constant occurrence in the juice of the flesh. These facts prove that these substances are indispensable for the healthy process carried on in the blood, and in the fluid of the muscles. Says the Professor,—"Proceeding on this assumption, the necessity for adding common salt to the food of many animals is easily explained, as well as the share which that salt takes in the formation of blood, and in the respiratory process. It is a fact now established by numerous analysis, that the ashes of inland plants, growing at a certain distance from the sea, contain no soda, or only traces of that base. The potashes of inland countries rarely contain any carbonate of soda, while the ashes of the same plants, growing in maritime countries, near the sea-coast, contain phosphate of soda and common salt; therefore, the food of animals is not in all places of the same quality or composition, in respect to the two bases, potash and soda."

"An animal feeding on plants which contain phosphates of other bases, along with some compounds of soda or sodium, produces in the body the phosphate of soda, so indispensable to the formation of the blood. But an animal living inland, obtains in the weeds, herbs, roots and tubers which it consumes, only salts of potash. It can produce, from the phosphates of lime and magnesia, by decomposition with the salts of potash, only phosphate of potash, the chief inorganic constituents of its flesh, but no phosphate of soda, which is a compound never absent in (healthy) blood. When, in inland countries, the food does not contain common salt enough to produce the phosphate of soda necessary for the formation of the blood, then more salt must be added to the food. From common salt is produced, in this case, by mutual decomposition with the phosphate of potash, or with earthy phosphates, the phosphate of soda of the blood.

"The phosphate of soda is indispensable to the normal constitution of the blood, and that the process which go on in that fluid cannot be replaced by phosphate of potash, seems to me to be an opinion fully justified by the properties of these two salts."

It seems to me, there can be no doubt in the mind of any one, of the correctness of the views of Professor Liebig, in regard to the utility of supplying farm stock with salt, in sections of the country remote from the sea-board, especially when we take his views in

connection with other familiar and well-established physiological facts.

Phosphoric acid and lime are indispensable in the formation of the bones of animals, and no other substances will answer that purpose. If the hay or grass upon which a milch cow is fed, is deficient in phosphoric acid and lime, instinct points out a remedy; the cow takes to eating bones, to supply the deficiency of the bone earth in her natural food. If she cannot obtain a sufficiency of phosphates for her milk, and to supply the daily waste going on in her bones and other portions of her system, emaciation and weakness follow, and sometimes death, from what is called the "bone disorder." A certain remedy for this disease is found in giving to the cows the fine bone-dust from the button-mould factories. A gill a day, given to a milch cow for a few weeks, will cure her of a propensity to eat old bones, and restore her to health and strength. There is no theory about this, it is a matter of fact. I have procured several barrels of the bone saw dust from the button factory at Brighton, as a medicine for the cows of farmers and others in this vicinity; and the past summer I furnished to a number of farmers the ground mineral phosphate of lime for the same purpose, and with equally good results. Lime is the principal mineral ingredient in the formation of an egg shell. If a hen is shut up, and fed wholly on food containing no lime, she may occasionally lay an egg, but it will have no shell. A hen can no more generate lime than she can gold or silver; nor any more transmute any other mineral substance into lime, to form her egg-shell, than she can produce the new three cent pieces of coin from gravel stones. Sulphur is a prominent constituent of the yoke of an egg, that is derived from the food upon which the bird subsists. No other substance will supply its place in the formation of the perfect egg, and "any bird which can organize a perfect egg, without a particle of sulphur to enter into the composition of its yoke, can create and lay a little world, with all its inhabitants."

The blood of animals is made up of globules, some of which are white, and others red; the red globules owe their color to the oxide of iron. In those diseased states of the blood in which the red particles are deficient in quantity, the functions of life are languidly performed; by the administration in medicine of the salts of iron, the florid color of the blood and complexion is restored, and the general state of the health is improved. Probably, from some disarrangement of the assimilating vessels in those persons whose blood is deficient in coloring matter, the vessels do not take from the food sufficient iron; therefore, in such cases, it is given direct, and in larger quantity than is usually found in the food, and with good results.

Common salt is a combination of muriatic acid with soda, an element, (in connection with certain acids,) so necessary to a healthy state of the blood. Clover, red-top and herd-grass, grown near the ocean, contain so much salt as to render the salting of the cattle fed upon it unnecessary, while the same kind of grasses grown here, some 60 or 70 miles inland, is so deficient in soda, that it becomes a matter of much consequence that our cattle should be supplied with salt, for a certain amount of soda, from some source or other, is required in the blood, and required, too, by a law more immutable than that of the Medes and Persians. 'Tis this law that induces the "salt hungry" cow or horse, to lick, for the half hour together, an old cask that has been used for salting meat.—

Journal of Agriculture.

Sowing Corn for Fodder.

MACEDON, N. Y., 3d mo. 21, 1852.

M. Editor:—I observe in a late number of the *Michigan Farmer*, an inquiry for the best mode of raising corn for fodder, and having tried several different ways, the results may be of benefit to others.

A common, and a very objectionable practice, is to sow broadcast. This requires at least four bushels to the acre, and even with this amount of seed, the growth is not dense enough to keep down the weeds, and as a consequence, the ground is left in a foul condition.

The best way is to sow in drills. First plow and harrow the ground, as if for corn or potatoes; run furrows in one direction, with one horse, about three feet apart; with a hand-basket of corn on the left arm, walk rapidly along-side of the furrow, strewing the seed with the right hand, at the rate of about fifty grains to the foot, which will be about two bushels and a half to three bushels per acre. A little practice will enable any one to do this evenly and expeditiously. The seed may be covered in the best manner, by means of a one-horse harrow, a one-horse cultivator, or a two-horse harrow, passed lengthwise with the furrows. Two men will thus put in five or six acres in a day.

The only subsequent culture needed, is to pass a one-horse cultivator between the rows, when the corn is about a foot high. No hoeing is required. Its growth will soon cover the whole ground, and all weeds, no matter how thick they may be, will be completely smothered and destroyed; and when, at the close of summer, the crop is removed, the ground will be left as smooth and clean as a floor. No crop have I ever seen equal to this, for reducing grassy, weedy soil, into mellow condition, in a single summer.

If the crop stands erect, it is most conveniently cut with a stiff scythe. A little practice will enable the workmen to throw it all in an even swath, with the heads in one direction, so as to admit of easy binding in bundles. If much thrown down by storms it must be cut with a corn cutter. When bound, it is to be put up in large, substantial shocks, to stand several weeks, or till winter, unless the ground is to be sown with wheat, in which case, the crop must be drawn off, and deposited to dry, elsewhere.

Every beginner spoils his first crop, by its *heating in the stack*. Even after drying several weeks, there is moisture enough in the stalks to cause violent fermentation. The only mode of preventing this disaster, is either to leave the shocks on the ground till winter, or to build very small stacks, with three rails placed upright together at the centre, for ventilation, and applying plenty of salt.

Fodder thus grown, and well eured and salted, is greatly preferred by cattle, to hay. A neighbor thinks three tons are as good as four tons of good hay. It should be grown so thick, that the stalks will be quite small; then they will be wholly eaten by cattle, and none lost.

I have tried different quantities of seed per acre, and find that a much less rate than about three bushels, is attended with a diminished crop, although the stalks may be taller. One bushel per acre, will yield but little more than half as much.

I usually obtain, on land that will yield thirty or thirty-five bushels of corn per acre, from four to six tons per acre of dried fodder. Counting all expenses, including interest on fifty dollars per acre for the land, the dried fodder, as an average for five or six years past, has cost me about one dollar and a half per ton. Hay is usually sold here for six or seven dollars a

ton, and sometimes for ten. Yet it is astonishing how reluctant our farmers are in adopting the corn fodder cultivation. I hope the farmers of Michigan may set a better example of economy.

The best variety of corn appears to be that which will afford the greatest number of stalks to the quantity of seed sown. Coarse fodder is not as good as fine. A rather moist soil is best, as immense quantities of moisture are thrown off by such a mass of leaves.

Besides the cheapness of this crop, and the great ease of its cultivation, it possesses the following advantages: 1. It may be sown after the hurrying work of spring is accomplished, or at the end of spring, or early in summer. 2. It may be harvested after the wheat and hay crop are secured, or during the comparatively leisure season at the close of summer. 3. Not yielding any grain, it does not exhaust the soil, and is, perhaps, the best crop to precede wheat. 4. It is an admirable crop for smothering and destroying weeds and grass.

A brief glance at the advantages of the general cultivation of this crop, may not be out of place. The value of the annual hay crop in the United States, is about one hundred millions of dollars. Those who have already adopted the corn-fodder crop, winter their cattle at less than half their former expense. Would it, therefore, be extravagant to believe that one quarter of the present expense in the use of hay throughout the country, would be saved by its general use? Yet one quarter is about twenty-five millions of dollars yearly—enough to endow agricultural schools, and build railroads by the score—and is well worthy of some exertion for its introduction at large.—*Michigan Farmer*. T.

American Poulterer's Companion.

A Practical Treatise on the Breeding, Rearing, Fattening and General Management of the Various Species of Domestic Poultry; with Illustrations and Portraits of Fowls taken from Real Life. By C. N. BEMENT, fifth Edition, Harper & Bros., New York.

Within a few years past, several publications, purporting to treat upon the rearing and management of domestic poultry, have been issued from the American press. Some of these works are mere re-issues of foreign authors, while others assume an air of originality, and profess to guide and instruct the farmer in all the details and management of an American poultry yard. With a single exception, however, any one or all of these publications may be read by the farmer, and he will close the volume with the feeling uppermost in his mind, that the information most desired, has not been obtained. True, he may have read with some degree of interest the origin and history of numerous varieties of "fancy fowls," (which seems to make up the sum and substance of most works on poultry,) but in this real-izing age, the farmer turns to his books for a more remunerative kind of information. He expects to be told *how* to make his poultry profitable, and when he can see for himself by the facts and figures of an experienced poulterer that these neglected tenants of his farm

yard can be made as profitable as any other branch of farming, he will be likely to treat them with the same consideration that he does his more costly Devons and Durhams.

In the book before us there is *more* of the right kind of information for the poulterer, than in any publication that has heretofore come under our notice. The author, C. N. BEMENT, is eminently a *practical* man, and the name of the author alone, is an ample guaranty that his neat little volume is precisely what it professes to be—a *practical* treatise on the rearing and management of domestic poultry.

With many years experience in the management of his own extensive poultry yards, he is enabled to give his readers the actual facts and figures in regard to profits and expenses, the most economical kinds of food, and many other important results to be obtained only by close personal observation and experience. But, we will let Mr. Bement speak for himself, and, as a convenient poultry-house is the first and most important, we might add, indispensable arrangement for the successful poulterer, we will select two of his best plans—the first, somewhat costly and ornamental, the other cheap and plain:



OUR OWN POULTRY HOUSE.

The above figure represents the front and elevation of rather an extensive and costly establishment, which would be very convenient, and add much to embellish the premises. The buildings at the ends are intended for laying, hatching, and roosting apartments. The cupolas on the tops are finished with blinds, for the purpose of ventilation as well as ornament. On the bottom of the cupolas, and inside of the building, should be a door, hung on hinges, with a cord attached passing through a pulley, so that it may be closed or opened at pleasure, to ventilate when required. In the gable ends, if facing the south, dove cotes may be formed; or they may be made in the roof, as in the figure.

The long building with windows in front, connecting the two extreme ones, is intended for a *storm-house*, *Chicken saloon*, or *walk*, for exercise in the winter, as well as a retreat from storms, feeding, basking, gravel, sand, lime, &c.; being made warm by filling in with brick, or lathed and plastered, and the roof should be thatched with straw. The front should be ten feet high, roof sloping to the north. The windows are intended to admit heat in winter, as well as light. If only for a storm-house, the windows may be omitted, and the front finished in the form of a shed. It will be found very convenient for feeding and watering, as well as for gravel, ashes, lime and sand. Boxes for nests may also be placed there for laying and hatching. By partitioning it off, two varieties of fowls may be kept separate; or one side may be appropriated for turkeys and guinea-hens, and the other to the gallinaceous tribe. Doors from each should open into the yards, which should be of considerable size; say, at least half an acre for two hundred fowls, as room and space in the air is necessary for their health, when they are not permitted the range of the barn-yard. The yard should, if possible, be a little sloping, that it may dry, as moisture is a most destructive enemy to poultry. It should be enclosed by a fence, at least seven feet high, with long, sharp pickets, and the timbers on which the pickets are nailed, unless some distance below the

top, should be on the outside, to prevent the fowls perching on them, as they seldom attempt to fly over a fence without alighting. When first confined, if they have been used to roam over the premises, they will show some impatience, which soon wears away, if everything else is made agreeable to them. It may, however, be necessary to clip the wings of some of them, when first introduced, particularly if taken from the barn-yard, where they have always had their liberty. My fowls are so attached to the yard that they are unwilling to leave it, even when the gates are open—the effect of education.

The buildings at the ends should be thirteen feet square, and thirteen feet posts. We name this size, as there would be no waste of timber, being just the length of the boards and joists. If not too near the dwelling-house, so that there would be danger of fire from sparks, we would recommend to have the roof thatched with straw, as being much warmer in winter, and cooler in the summer, and when well done, it forms a light and durable roof, and will last for twenty years. It should, however, be made very sloping, in order to carry off the water more readily. A hole one foot in diameter, about two feet from the ground, with a door, either to slide, or hung on hinges at the top, which may be held open by means of a cord, should be made in each department, for the fowls to pass in and out, and to confine them when necessary. There should be no floor in the first story to prevent the fowls from coming to the earth; and the litter should be often removed, and the bottom sprinkled with lime, at least once in each week.

In the second story, there should be a tight floor under the roosts to catch the droppings of the fowls, by which means the apartment can be kept much cleaner, and the manure may be saved and sold to the morocco-dressers, for which they readily pay eighteen cents per bushel; or it may be gathered for manure, which, with the exception of pigeon's dung, is said to be the strongest of all animal excrements—it is *home-made Guano*. This will add an item to

the profit of keeping fowls, that has heretofore been entirely overlooked.

The roosts should commence on one side, at the top, near the plate, and slope downwards, at an angle of about 45 degrees, like a ladder, to within eighteen inches of the floor. The spars for the roosts should be about two inches square, with the corners taken off, and placed eighteen inches apart horizontally, for the fowls, and at least two feet for the turkeys, so that they may not incommode one another by their droppings. No flying is necessary in this form of a roost, as the birds ascend and descend by steps. It is recommended by some writers, to have the spars or cross-pieces for roosting, of sassatras, two inches in diameter, with the bark on, which is said to be a protection from vermin—in which, however, we have no faith.

The lower story is designed for the laying and hatching apartment. When we first erected our poultry house, we tried ranges of boxes similar to those generally made for pigeons, placed against the sides of the walls for nests—but experience, the best of teachers, proved it was erroneous, especially when hatching; for when the setting hen left her nest to procure her food, drink, &c., one of the other hens would espay the eggs, and pop in and lay her egg. In the mean time, the hatching hen would return and find her nest occupied; and finding it no easy matter to eject the intruder—as possession, with hens, like men, is considered nine points of law—would seek the first nest she could find with eggs, and settle herself there very contentedly. The consequence was, the other hen, after depositing her egg, would leave the nest, and the eggs would cool and spoil. There is another difficulty. If vermin should make their appearance, there is no way of getting at them or

cleansing the nests; to remedy this, we had separate boxes made and hung around the sides, and placed in the corners, which can be removed when hatching, or cleaned and freed from vermin when necessary.

The foregoing plan, though "rather costly," as the author remarks, is very complete in its arrangements. We had a building erected from this design—90 feet by 13, brick walls, shingle roof, plastered inside, the wood-work thoroughly coated with Chester county mineral paint, and the establishment furnished with laying boxes and feeding hoppers, after Mr. Bement's designs, as described below—the cost of the whole being \$500. The "storm-saloon" has some seventy feet of glass front, the temperature in which, without artificial heat, averages about 40 degrees in ordinary winter weather. During the extreme cold of last winter, when the mercury ranged at Zero, the water in the saloon was frozen. Along the back wall of this saloon we have a row of laying-boxes, fifty in number, which will accommodate at least 300 hens, as they prefer laying several together in the same nest. This building will accommodate about 500 fowls—we have some 400 in at present, without being at all crowded.

The "New York Poultry House," figured below, of the same capacity, can be erected at one fourth the cost, and will answer every purpose for those who are not disposed to indulge in a more "fancy" establishment.

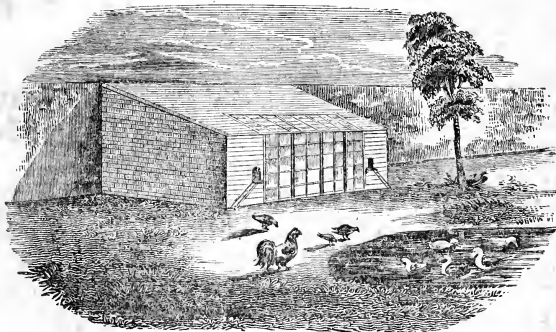


Fig. 18.

NEW YORK POULTRY-HOUSE.

After detailing the conveniences and manner of construction of several establishments, we come now to a very simple, complete, and to our mind, a very efficient fowl-house, as given by a correspondent under the signature of H., in the American Agricultur-

ist. The writer says, "The accompanying plan and references render a particular description unnecessary. The north, east and west sides of the house are of brick; the floors are of cement to keep out rats.

"Fowls will not lay well in winter, unless they have during the day a dry, light and warm apartment in cold and stormy weather. The room marked C is designed for this purpose; it is lighted in

front and above by sashes, one of which, in front, is hung with hinges for the entrance. If necessary, a ventilator may be added to the roof, or a window in each end."

Fig. 19.

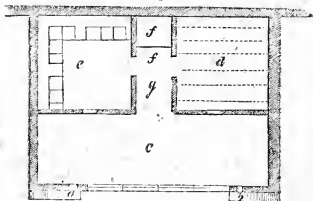
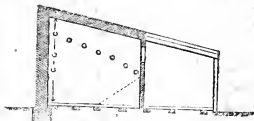


Fig. 20.



EXPLANATION.

Fig. 18. Elevation.

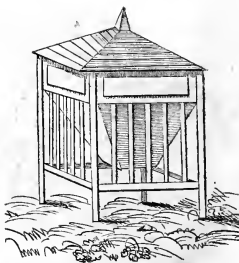
Fig. 19. Ground plan—*a, b*, apertures for admitting fowls, with slides for closing; *c*, place for feeding; *d*, roosting-room; *e*, laying-room with secluded nests; *f*, bin for feed; *g*, passage.

Fig. 20. Section through *a*, showing the position of the roosts.

FIXTURES FOR THE POULTRY HOUSE.

The house being completed, the next important matter is the necessary fixtures for feeding, laying, &c., &c.. "Some farmers," says the author, "are in the practice of feeding their fowls from the hand, strewing it over the ground, while others throw down corn in the ear, in a heap, and permit the fowls to help themselves. This, however, is considered a wasteful and slovenly mode, and well calculated to invite rats and mice.

We have found it more economical to keep grain constantly before them, and for that purpose adopted feeding-hoppers or fountains. Before adopting any plan, we examined several works of poultry, but did not find any to our liking; we then looked into London's Encyclopedia of Agriculture, and there found the desired object, but too complicated and costly for our purpose; we, however, took a hint, and constructed one ourselves, of which the following figure is a fair representation, which we exhibited at the Fair of the New York State Agricultural Society, held at Albany, in 1842, which exacted some attention, and which the Committee highly commended, and honored us with a diploma.



This feeding hopper, as may be seen above, is four feet square, two feet each way—posts eighteen

inches long, and two inches square. The upper section of the box is six inches deep, and the sides are morticed into or nailed to the posts. From the bottom of this square, the slanting part or tunnel reaches to within half an inch of the floor, which should be six inches from the ground; the tunnel tapers from two to one foot; and in order to bring the grain within reach of the fowls, a cone, (Fig. A is a section) is placed in the centre, as much smaller than the hopper as to leave half an inch space all around, which conducts the grain to the edge, where, as the fowls pick the grain away, more will fall, and keep a constant supply as long as any is left in the hopper. The slats on the sides prevent the fowls from getting in or crowding one another. This fountain will hold two bushels or more of grain, and protects it from wet and in a measure from rats. It occupies but little room, and from sixteen to twenty fowls can feed at the same time.

To protect the grain more effectually from rats and mice, we would suggest that the posts be made some two feet longer, and a platform of boards, about one foot wide, placed round and fitted close up to the bottom, so that mice cannot climb up the posts and get in. This platform will be necessary for them to stand on when eating.

WATER FOUNTAIN.

"There should, if possible, be running water in the yard, as fowls, like some other bipeds of larger growth, prefer clean, pure water; and in order to prevent their drinking by chance what is bad or corrupted, stone or wooden troughs, or what is much better, a keg set on a stool, on end, with a small tube extending from the bottom to a shallow dish or pan, which should be small, so that the fowls cannot get into and soil the water." * * * *

PLANS FOR NESTS.

Suitable and attractive nests are indispensable accompaniments to the poultry-house. The author describes several plans, the most complete of which, in our opinion, is the following:

"The hen," says Mr. Bement, "is a prude, and likes to steal away in some sly place to deposit her eggs. To gratify their organ of secretiveness, the following ingenious plan for fixed nests we take from the 'American Poultry Book,' which, the author says, 'has lately been contrived in Connecticut, and I have tried with complete success. Hens are well known to be anxious to deposit their eggs in secluded places. The secret nests here alluded to are well adapted to satisfy this propensity. They are made thus:

Fig. 27.



Fig. 28.

"Place a platform of boards, two feet wide, and say ten feet long (though it may be made of any length,) against a building or a close board fence, about three feet from the ground. Along the outer edge of this platform nail a board, lengthwise and upright, about one foot high; leave a space open in the middle, and at each

end eight or nine inches wide, and divide the remaining space inside the nests a foot square; this

leaves a passage way nearly a foot wide behind the nests. The top must slope from the wall, and open partly or entirely with hinges. These nests are easily examined, and give the fowls all the secrecy they seem to require. Fig. 27 shows the appearance of this series of nests when closed. Fig. 28 exhibits a view of the interior arrangement."

With these extracts, we must forbear further notice, at present, of this valuable work. We cannot part with it, however, without again recommending it to the attention of every farmer who designs "growing" poultry with an eye to profit. He cannot read the book "if he tries," without getting value received for his outlay in time and money.

This little volume is got up in the usual neat style of the Messrs. Harpers—to whose politeness we are indebted for the accompanying engravings—and is for sale at the book stores generally, we presume, and is also among the collection of agricultural works at the warehouse of P. Morris & Co., West Chester. Price, \$1.

Basket Willow.

The cultivation of Basket Willow in the United States appears, from the facts which have come to our knowledge, to be a subject deserving serious consideration. It is stated, upon the best information, that the value of the annual importation of the article into this country amounts to nearly five millions of dollars, and that large as the quantity may seem, it does not satisfy the consumption. The supply is derived from France and Germany, and the price paid here ranges from \$100 to \$130 per ton weight. There are three varieties of the plant regarded as best suited for basket making, farming, tanning and fencing. Of these, the *Salix Viminalis*, is most used in the manufacture of baskets, and, under favorable circumstances of soil and culture, an acre of ground will yield at least two tons weight per year, costing, when prepared for market, about \$35 per ton. The next species is the *Salix Capua*, or Huntingdon willow, adapted for basket making, but more extensively employed by English farmers for hoop poles and fencing. When used for the latter purpose, the manner of planting is described to be "by placing the ends of the cuttings in the ground, and then working them into a kind of trellis work, and passing a willow withe around the tops, so as to keep them in shape for the first two years. The tops are afterwards cut off yearly, and sold to basket makers, thus obtaining a fence and crop from the same ground." The hurdle fences of England, removable at the pleasure of the proprietors, are also made from the *Salix Capua*. The third kind of willow to which we have reference, is the *Salix Alba*, or Bedford Willow, which is held in high esteem as a shade tree, and very generally cultivated for this use in England. It is remarkable for its beauty and rapid growth—affording a good shade, it is said, in two years after planting. The bark is, also, much prized for its superior tanning properties, while its wood, from its fine grain and susceptibility of a polish as fine as that made on rosewood or mahogany, is in extensive requisition for shoemakers' lasts, boot-trees, cutting-boards, gun and pistol stocks and house timber. This, too, is the willow that is chiefly used in England in the manufacture of gunpowder. An acre

of the wood, after ten years from planting, has sold for £155.

As respects the practicability of growing in this country the willows enumerated, experiment by a number of enterprising farmers and horticulturists in New York and other states, has been made successfully on a small scale. The soil and climate of the United States are, in many places, favorable to the cultivation of the plant, and but little care is necessary to bring it to perfection. Those persons who have engaged in the enterprise, and have experience in the work of raising this species of vegetable for manufacturing purposes, assert confidently that it can be grown profitably in numbers of the States, at \$50 per ton weight. It is also said, upon well ascertained data, that there are hundreds of thousands of acres of lands here, either not improved at all, or yielding but a very small per cent. per annum, which could be made, by occupying them with the osier, productive of immense profits. On this point, an intelligent gentleman, who has a practical acquaintance with the subject, says:

"Every farmer will acknowledge meadow land to be poor that will not yield a ton of hay to the acre, which, when cured and in market, seldom sells for more than \$12. All men who are acquainted with the growth of willow for market, well know that an acre of land ought to yield at least one and a half tons weight of it. The cost of preparing willow for market would not exceed \$40 per ton. Now, estimating hay at \$12 per ton, and willow at \$120, deducting from the willow \$40 per ton for preparing for market, there is a balance in favor of the willow of \$80 per acre."

The feasibility of the cultivation in the United States, has been, hitherto, and very naturally, decided by importers, who have represented the crop to be liable to damage from flies, and have also alleged the price of labor to be too high to allow of fair, remunerating returns. In contradiction of this, we here cite the testimony of Mr. W. G. Haynes, of New York, who is occupied in the production of the willow for mechanical uses. He says:

"I have grown as good a quality of willow as is raised in any part of the world. That taken from two acres cut last year, yielded me, clear of all expenses, the snug little sum of \$333 75. If I had the means, I would purchase lands and plant thousands of acres of willow, and find a ready market for it."

To convince those who have not investigated the subject, of the lucrative nature of the trade, it is sufficient to state that the large importation of basket-willow, made during last summer, by four or five houses in New York, was not equal to even half the demand, which is increasing every day. Furthermore, it has been discovered by one who has industriously collected the statistics, that the amount of money paid for willow baskets alone, in the city of New York, exceeded \$1,000,000, and that the sum paid for baskets shipped to the Southern and West India markets probably reached \$2,000,000 more. These facts are certainly important, and well worth the reflection of men who are properly situated for embarking in a business which, in all points of view, promises advantages so decided and great. The native product would always command a sale here, in preference to that imported, by reason of the cleanliness of the crop, and its freedom from bruising and breakage occasioned by packing in a ship's hold, not to mention that the imported article is the mere refuse of the foreign crop, which is generally carefully picked by the French and German basket-makers, who retain the best qualities for their own manufac-

ture into fabrics subsequently exported to this country.

Besides the inducements which an extensive domestic demand for the willow holds out to our agriculturists, Great Britain annually imports from the continent a large quantity of it, and there is no reason why producers of the raw material here should not supply the consumption of England as well as of the United States. In short, the project of cultivating the *Salix Viminalis*; and other species of the plant adapted to manufactures, appears worthy to claim the earnest attention of the American farmer; and, in view of the obvious rewards which it would yield his labor and capital, we are surprised the subject has not long since been discussed in the agricultural societies of the land, and tried thoroughly by liberal and enlightened experiment. It is not yet too late to render it a valuable source of private and national revenue.

Distinguishing Characters of Soils and Subsoils.

Beneath the immediate surface of soil, through which the plough makes its way, and to which the seed is entrusted, lies what is commonly distinguished by the name of *subsoil*. This subsoil occasionally consists of a mixture of the general constituents of soils naturally different from that which forms the surface layer—as when clay above has a sandy bed below, or a light soil on the surface rests on a retentive clay beneath.

This, however, is not always the case. The peculiar characters of the soil and subsoil often result from the slow operation of natural causes.

In a mass of loose matter of considerable depth, spread over an extent of country, it is easy to understand how—even though originally alike through its whole mass—a few inches at the surface should gradually acquire different physical and chemical characters from the rest, and how there should thus be gradually established important agricultural distinctions between the first 12 or 15 inches (the soil), the next 15 (the subsoil), and the remaining body of the mass, which, lying still lower, does not come under the observation of the practical agriculturist.

On the surface, plants grow and die. Through the first few inches their roots penetrate, and in the same the dead plants are buried. This portion, therefore, by degrees, assumes a brown color, more or less dark, according to the quantity of vegetable matter which has been permitted to accumulate in it. Into the subsoil, however, the roots rarely penetrate, and the dead plants are still more rarely buried at so great a depth. Still this inferior layer is not wholly destitute of vegetable or other organic matter. However comparatively impervious it may be, still water makes its way through it, more or less, and carries down *soluble organic substances*, which are continually in the act of being produced during the decay of the vegetable matter lying above. Thus, though not sensibly discolored by an admixture of decayed roots and stems, the subsoil in reality contains an appreciable quantity of organic matter which may be distinctly estimated.

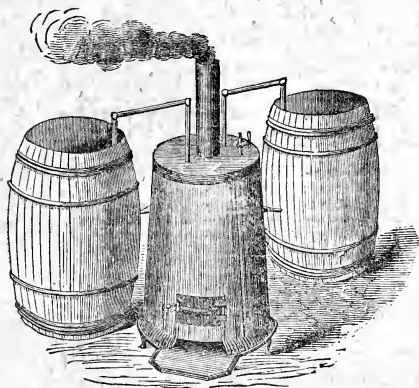
Again, the continual descent of the rains upon the surface soil, washes down the carbonates of lime, iron and magnesia, as well as other soluble earthy substances—it even, by degrees, carries down the fine clay also, so as gradually to establish a more or less manifest difference between the upper and lower layers, in reference even to the earthy ingredients which they respectively contain.

But, except in the case of very porous rocks or accumulations of earthy matter, these surface waters rarely descend to any great depth, and hence after sinking through a variable thickness of subsoil, we come, in general, to earthy layers, in which little vegetable matter can be detected, and to which the lime, iron, and magnesia of the superficial covering has never been able to descend.

Thus the character of the *soil* is, that it contains more brown organic, chiefly vegetable, matter, in a state of decay—of the *subsoil*, that the organic matter is less in quantity and has entered it chiefly in a soluble state, and that earthy matters are present in it which have been washed out of the superior soil—and of the *subjacent mass*, that it has remained nearly unaffected by the changes which vegetation, cul-

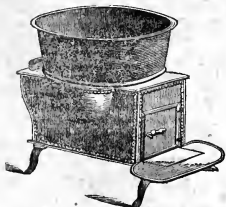
ture, and atmospheric agents have produced upon the portions that lie above it.

From what is here stated, the effect of trench and subsoil ploughing, in altering more or less materially the proportions of the earthy constituents in the surface soil, will be in some measure apparent. That which the long action of rains and frosts has caused to sink beyond the ordinary reach of the plough is, by such methods, brought again to the surface. When the substances thus brought up are directly beneficial to vegetation or are fitted to improve the texture of the soil, its fertility is increased. Where the contrary is the case, its productive capabilities may for a longer or a shorter period be manifestly diminished. —[*Johnston's Agricultural Chemistry*.



Farmers' Boilers.

We insert engravings of two patterns of boilers for boiling and steaming food for stock, with the results



below of some experiments, showing the advantages of cooked over uncooked food. They may be obtain-

ed at any of the agricultural warehouses, at prices varying from \$6 50 to \$25 00, according to size. This mode of preparing food for stock, is part of the *improved* system of farming, which farmers *must* come to, if they regard their own interests. There is no doubt about this. It is only a question of *time*. The sooner it is adopted, the greater the profit.

Cooked Food for Cattle—Value of Roots in Fattening Cattle, etc.

WESTON, SOMERSET CO., N. J.,

March 8th, 1850.

PROF. MAPES—Dear Sir:—Enclosed you have an account of my recent experiment, made at your request, in feeding cattle with *cooked-feed*, &c.

I selected two pair of cattle from among eight pair, which were similarly conditioned, and which I had

fed alike, and for about the same time. They were weighed on the first of January:

No. 1 weighed	1620 lbs.
No. 2	1750 lbs.
No. 3	1670 lbs.
No. 4	1510 lbs.

Nos. 1 and 2 were fed during January on 9 lbs. of corn and oats, (not ground) in the proportion of 9 parts corn to five parts oats by measure, and boiled in a three barrel kettle, in which was placed thirty six gallons of water, one and a half quarts of salt, and about seven bushels of grain mixed as above—boiled this mixture for two hours, using an armful of dry wood, and two bushels of corn-cobs as fuel. I then cover the kettle, placing over the cover a horse blanket, keeping in the steam and preventing too rapid cooking, and by this means the contents of the kettle will remain warm and soft until fed out.

Nos. 3 and 4 had 10 lbs. of ground feed, mixed in the same proportion of oats and corn, (but not cooked,) each day. In every other particular, all four were fed alike—each pair having a small quantity of carrots and turnips each day, with as much common hay and corn stalks as they choose to eat.

On the first of February they were again weighed.

No. 1 weighed	1725 lbs., having gained	105 lbs.
No. 2	1850	100

Weight, February 1st,	3575 lbs.	
Weight, January 1st,	3370 lbs. gain in 1 month,	205 lbs.

Nos. 1 and 2, it will be recollected, had cooked food during the month of January, and gained 205 lbs.

No. 3 weighed	1750 lbs., having gained	80 lbs.
No. 4	1550	40

Weight, February 1st,	3300 lbs.	
Weight, January 1st,	3180 lbs. gain in one month,	120 lbs.

Nos. 3 and 4 were fed on *raw feed ground*, and one pound per day greater in quantity than that fed to Nos. 1 and 2, (not ground, but cooked,) and still, although in every other particular they were fed and cared for alike, the difference in favor of cooked feed is very large. The expense of grinding being greater than the expense of cooking, the economy is every way in favor of the cooked feed.

Gain with cooked feed,	205 lbs.
Gain with raw feed,	120 lbs.

Gain in favor of cooked feed,	85 lbs.
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On the first of February I ceased to use turnips and carrots, and substituted best clover hay for common hay and corn stalks.

Fearing the great difference in favor of cooked feed might arise in part from the peculiarity of the cattle, particular state of health, or some other accidental cause, I now changed them, and put Nos. 3 and 4 on the cooked feed, and Nos. 1 and 2 on the raw feed, increasing the quantity of feed to each pair, one pound.

Previous to commencing the experiment on the 1st of January, each pair had been accustomed to use some roots, pumpkins, &c., and this may account for the change I am about to describe after a discontinuance of the roots.

From the 1st of February to the 1st of March, Nos. 1 and 2 were fed on ground raw feed, Nos. 3 and 4 on whole cooked feed.

On the first of March they were weighed again, when

Nos. 3 and 4, on cooked feed, had gained but	47 lbs.
Nos. 1 and 2, on raw feed,	22 lbs.

It will be seen from the above, that although the cooked feed at least cost continued to produce most growth, and in about the same relative proportion, still each pair, when fed with roots in addition, gained much more rapidly than when fed on grain and clover hay alone.

I would remark, that 16 lbs. of corn and oats in the proportion before named, will weigh, when cooked, 34½ lbs. If you think the above would be useful to your readers, you may publish it in the—*Working Farmer*.—JAMES CAMPELL.

Who are the Practical Farmers?

From the London Farmer's Magazine, we copy some extracts from an address by J. C. Nesbit, which we think is entitled to consideration and attention:

Mr. Chairman and gentlemen, I feel very highly gratified at seeing such a numerous assemblage of gentlemen interested in the progress of agriculture; and I shall feel very great satisfaction this evening, in endeavoring, as far as I possibly can, to elucidate the science of agriculture with reference to the application of chemistry to its development. I am not come down to you with a vast amount of chemical apparatus; I have not brought here a prodigious number of curious things, of which you might have wondered what was their use. I come to you this evening with the language of plain common sense; and with the operations which you are continually performing on your farms as the basis of my arguments, I shall see if I cannot, by applying to them the rules of plain common sense, elucidate the subject, and secure to you a greater knowledge of the science of agriculture than you already possess. Before doing this, however, I must make one or two observations. And, gentlemen, I must, in fact, quarrel with you, because you arrogate to yourselves alone, what I think you ought not to claim for yourselves alone—the title of *practical men*. "We, we, we," you say, "are the practical men," as if there were no other practical men in the kingdom besides yourselves, and as if no one else understood the nature of things. Now, I mean to contend that the title "practical" does not belong to the farmer alone; and I have certainly some doubt whether it ought to be applied to the farmer at all, in its full signification. I will take, for example, the case of Mr. Tomkins, who is a capital farmer. He farms his land well; he keeps stock and grows turnips, and does every thing in the best manner. Now, as a poor student in science, I want to gain from this gentleman some useful practical information. With this object in view I say to Mr. Tomkins, "Pray, what have you got in your soil—what are its properties?" He replies that it is a sandy soil, a loamy soil or a clay soil. "Yes; but what have you got in the one and what in the other?" "I don't know: I have not gone so far as that yet." I then ask, "What have you got in your manure?" And Mr. Tomkins, good, easy, practical man as he is, says, "I cannot tell you." If I ask him what his crops take out of the land, again he declares that he cannot answer my question; he knows that they take away something; he knows that if he sows wheat, barley, or any thing else, something must be taken away by the crop; but what that something is, he cannot determine. Lastly, if I ask Mr. Tomkins what is in the air and what is in the water, he is still obliged to confess that he does not know. Now, gentlemen, I appeal to you whether the term *practical*, in its largest sense, will apply to Mr. Tomkins, while he actually knows nothing whatever of those things on which the success of the agriculturist particularly depends. I grant you that Mr. Tomkins looks at his crops, manures and soils, in the whole, and that he has got some general idea of them as a whole; but then he never seriously considers what this whole

is composed of; and what I propose to do is to extend his knowledge a little further; so that, instead of his attention being confined to those generalities on which it has hitherto been fixed, he should be made acquainted with every thing in the soil, in the crops, in the manure, in the air and in the water. (Hear, hear.)

Now, I ask you, gentlemen, as practical men, to say whether you consider that this knowledge would not be worth having, and whether it would not be well for every man, as far as it may be in his power, to seek to attain such knowledge. Well, now, having thus prefaced my subject, I shall at once commence the consideration of the manure made on the land; and I shall afterwards offer a few observations on the rotation of crops, and the nature of those substances which are offered to the farmer, under the name of artificial manure. And let me here observe that I shall be very happy, at the close of the lecture, to hear any remarks, or to answer any questions which may occur to any one present, having reference to any thing which I may have said; for some of the things which I intend to present to your notice may be so new, and so contrary to ideas previously impressed on your minds, that you may doubt the truth of my statements; and the best way to settle any question of that kind is to argue the point at the close of the lecture. (Hear, hear.)

Let us begin with the far-famed farm-yard dung, which is supposed to be so superior to all other things. It is that which grows the crops, and which, in the estimation of the farmer, is not surpassed by any possible combination of substances. Now, what is this farm-yard dung? It is formed by acting upon vegetable matter in some other way. You either take a quantity of vegetable matter, and pass it through the stomachs of animals, where it is acted upon and the refuse passed out, or you put vegetable matter, as straw or litter into the yards, and allow the excrements of animals to be mingled with it, and a slow decomposition to take place. The whole being commingled and mixed together is known by the name of farm-yard dung. Now, a very little consideration will show that the whole of the material which is found by you, gentlemen, to be practically so useful on the farm, is merely derived from vegetables; so that you are, in fact, applying the remains and refuse of vegetables to renovate the land. This is the whole secret of farm-yard dung; it is vegetable matter, which, when partially decomposed, is re-applied to the land, where it forms vegetables over again; so that you are continually working, as it were, in a circle. Thus, the same particles of matter imported on the farm, perhaps in the shape of oil-cake, first re-appear in the shape of a turnip, again as barley, now as beet-root, now as wheat—the cycle of changes continues until the identical particles are exported from the land as beet or mutton or as grain. Now I hope I shall be able to offer one or two ideas with respect to the origin and nature of this farm-yard dung; and let me say we can never have our ideas too near the truth respecting the origin and nature of that which is so constantly under our notice. Some gentlemen have got an idea that animals have a mysterious power; of what nature, it is impossible to say, but they imagine that it really exists; a mysterious power, by means of which they can change a turnip, or a quantity of oats or greens, into a superior manure for land; and that food must have passed through the animal before it can be really useful on the land. That is the idea entertained on this subject by ninety-nine farmers out of a hundred. I must proceed this evening to disabuse your minds of that errone-

ous notion; I must inform you that the manure obtained from animals is always dependant, as regards its value, on the food which the animal eats, and that the excrements of animals are always less valuable, and less powerful in manuring principles, than is the food consumed by those animals whilst producing the manure; the green food, plowed into the land, will give more manure to the land than the same food eaten by the animals. Not that I would recommend you, as a rule, to plow in your vegetables; but I wish you to remember that your sheep can deposit nothing on the land but what they first received from the food; and that, under all circumstances, the amount deposited will be less than that received. Now let us look a little at this point. You know that in one of our ordinary fire-places, when coals are put into the grate and a light is applied to them, an action takes place which makes the air above differ from that below the fire; without any mention of the name of a single chemical element, you have only to apply your plain common sense in order to be aware that an action takes place between the air and the coals, producing heat, and that the air above the coals, (in the chimney,) is very different from the air below the coals, which enters at the grate. Now, you give an animal a certain amount of food; that food is taken into the system: the constant action of the lungs, which inspire and expire the air, has the effect of bringing into the system a large amount of air. This air acts upon the food which is taken into the system. By the combustion or burning of a certain amount of that food, animal heat is produced, which keeps up the temperature of the animals, so that they get a higher temperature than the surrounding atmosphere. The expired air contains the result of that combustion, and resembles in composition the air of the chimney; another portion of food not used for producing animal heat is laid upon the bones, forming muscles, or fat; and what the bullock itself has no use for, is cast out of the system. Now, you observe at once, that the animal, by acting in this way on the food, actually deprives it of certain constituents, and at the same time makes it less in amount; so that, in fact, the only real action is one which takes away certain portions of the food, and renders the others more quickly soluble. All the soluble parts of the food are passed out in the urine, and all insoluble parts in the excrements. There is a regular process performed in the laboratory of the stomach, the effect of which is what I have thus described.

Now, the same thing takes place in the decomposition of vegetable matter. You lay down a large quantity of straw, and you let the water fall upon it, as well as the excrements of animals. You all know what takes place. The heap gradually heats, and this gradual heating is nothing more than the effect of the gradual action of the air upon it. Certain portions of the vegetable matter thus acted on by the air are consumed and taken away, and the bulk becomes less; so that, even in the process of acting on vegetable matter, you lose a portion and it goes off into the air, just the same way as the solid parts of coals pass into the air by means of the chimney. You all know that the solid parts of coal disappear and leave nothing but ashes behind. The two cases, are, in fact, identical. I may refer you to the case of a hay rick, put up in too damp a state. In that instance, an immediate action takes place from the contact of the air with the moist hay, and that action continues increasing, until, at last, the whole bursts into a flame. Now, gentlemen, in either case, in making manure there is a diminution and a loss.

You must have seen the reek going off from the dung-heap, and there are other substances which also disappear in the air which you cannot see.

[TO BE CONTINUED.]

Green Crops for Plowing Under.

The great feature in the modern system of improving light soils is the use of green crops for plowing under.

That I may not be misapprehended by farmers in this district, it is necessary here to say that when speaking of the green crop system, I mean both the crops that are plowed while green during summer, and those that are left until the ensuing spring and then plowed in dry. It is in both cases an improvement by the use of green crops, there is only a difference as to the time of plowing in.

Vegetable matter serves many of the purposes of clay in retaining moisture, and preventing the escape of fertilizing substances. Thus many soils which contain little clay, are yet very fertile, because a large portion of them is vegetable in its origin; such are some of our rich garden moulds, or drained swamps.

Green cropping fortunately enables us to supply the deficiency of vegetable matter much more easily and cheaply than that of clay; hence it has become a prominent feature in the management of every farmer who is desirous of greatly advancing the value of his land. The plants used as green crops are numerous, and speaking of the theory or theories connected with their operation, I may properly devote a few words to the mention of those varieties which are most important in this and other countries. Here, at least in the Northern States, almost the only green crop employed is clover. The properties and appearance of this plant are so well known as to require no description. Upon most soils it is easily grown, and in those where it does not thrive naturally, skillful manuring will generally bring it in. More would be gained by plowing under the crops of two successive years than in any other way, but this plan would not work well on most soils, and there are few farmers who would be willing to let land be idle so long as this while it would bear any thing at all. Many prefer to go on cropping until they can scarcely get their seed back, and then are obliged to let the land lie idle for a series of years in place of one or two, until it has regained strength enough to bear another scanty crop. Many, too, are unable to resist the temptation to cut and carry away the clover if its growth is heavy. Their intentions are good early in the season, but as haying time approaches they begin to think of the two or three tons per acre of hay which might be obtained by cutting, and finally the advantages of present gains more than counterbalances the prospective improvement of land. They afterwards plow in the rowen, it is true, but that cannot make up for the far heavier growth of which they have already robbed the soil. Some excuse themselves by saying that so large a crop cannot be got under, but it is not so, for this can be done by going over the surface with a heavy roller, in advance of the plow, and the clover then lies flat, and a plow with a sharp coulter has no difficulty in turning it over completely. Others recommend a heavy chain hung from the plow beam so as to drag the clover down before the plow share reaches it. On the light soils of which I speak, these precautions will probably be needless for some time to come.

There are some soils where even a scanty yield of

clover can only be obtained after much trouble and expense; on these it is best to commence by the cultivation of some plant more particularly suited to such situations.—*Prof. J. B. Norton.*

The Cocoa Nut Tree.

Mr. Treloar, of Ludgate Hill, London, the cocoa-nut fibre manufacturer, has published an interesting pamphlet, showing the uses to which the various parts of the cocoa-nut tree are applied. The purposes of utility to which this tree may be put are very numerous. The Cingalese have a saying, "that it has ninety-nine uses, and the hundredth cannot be discovered." From the full grown leaves are formed mats, carpets, baskets, sails, tents and liquid measures. The cocoa-nut oil yearly imported into England, is valued at £100,000. By means of mechanical processes, secured by patent, the value of cocoa-nut fibre has been much increased. It has been found suited for the production of articles of great utility and elegance of workmanship. A Great Exhibition prize medal was awarded to Mr. Treloar for the best specimens of matting, mats, brushes, mattresses, and other articles made of cocoa-nut fibre.—*Scientific American.*

Original Communications.

For the Farm Journal.



Galleria Cereana. (Bee Moth or Wax Moth.)

Belongs to a Lepidopterous group called (Crambidae) or Crambians. This insect, which was probably introduced into this country along with the hive-bee, (*Apis mellifica*), is one of the greatest, if not the very greatest enemy that that industrious and useful little creature has to contend with. Notwithstanding that bees are well armed with instruments of defence, sufficient, too, to resist the attacks of more formidable enemies, yet so insidious, so determined, and so persevering is the progress of the larvæ of the bee-moth, and so destructive is its ultimate character, that the legal occupants of the hive are often compelled to desert it, and yield it up to these pernicious intruders altogether. The bee-moths were known to the ancients under the name of *Tinea*, and were noticed in books of husbandry by Virgil and others, hundreds of years ago. Linnæus, Kirby & Spence, and others, have mistaken the differences in the male and female, and accordingly regarded them as two distinct species, (*cereana* and *mellonella*), but for the sake of avoiding confusion, modern naturalists generally adopt the name given by Fabricius, (*Galleria cereana*.)

One striking peculiarity in the habits of this insect is, that it feeds upon a substance that is indigestible,

or affords no nourishment at all to other animals—namely beeswax. The female moth enters the hive in the evening, when the bees are at rest, and deposits her eggs; or if from the crowded condition of the hive, she finds it impossible to enter, she is content to deposit them on the outside.

As soon as the feeble little thread-like worm is excluded from the egg, it begins to spin for itself a little silken tube, in which it shields itself from the attacks of the bees, and thus passes safely and unseen in every direction through the waxen cells, which it breaks down, devours and destroys. It generally pursues its work of demolition in the night, or in dark cloudy weather, when it can do so unseen.

In three or four weeks, accordingly as circumstances are favorable or adverse, these larvæ attain their full size, which is about one inch in length more or less, accordingly as they have been well or sparsely fed. They then spin themselves up into a strong silken follicle or cocoon, an inch or more in length, and of an oval shape. These pods may sometimes be found in large clusters in the upper part of the hive. In about two weeks from the time they have spun, they evolve from the pupa state and come forth a moth, measuring across the expanded wings nearly one and a half inches; of a dusty gray color; the fore wings are more or less glossy, and streaked with purple or brown on the outer margin, with a few dark spots near the inner margin. The hind wings are yellowish grey, with whitish fringes.* The female is larger than the male and darker colored. In a state of rest, the wings close flatly on the top of the back, deflexed at the sides, and turn up a little at the ends; the insect then measures about three-quarters of an inch in length. Two or more broods usually succeed each other in one year, the first appearing the latter end of April, or beginning of May. When the transformation to the pupa state takes place in the fall, they remain in that state all winter, and the moth evolves in early spring.

The moth usually hides in chinks and crevices about the bee-hives during the day, and comes forth at night.

The only sure method for the extermination of the Bee-moth is the frequent examination of the hive, and the destruction of the caterpillar or larvæ, and the chrysalids. Warm, dry weather seems to be the most favorable for the production of these moths, especially in the months of August and September. Their presence is generally indicated by a deposit of fine powder-like excrement on the bottom of the hive.

As the perfect moth is fond of anything sweet, a vessel placed near the bee-house, containing a sweetened mixture, in the evening, may attract many of them, and thereby drown them.

S. S. R.

Theory of the Action of Lime used in Agriculture.

[CONTINUED FROM PAGE 230.]

For the last two months I have been unable to continue to furnish to the readers of the Journal my views of the action of lime when applied to the soil. I was obliged to visit the city of New Orleans on professional business. Although this is far from being my first visit to the sunny South, yet I this time made some observations during my journey, which I intend, in course of time, to offer to your readers.

We, in the November number, considered the action of lime strictly in a chemical point of view, and I trust that nothing was put forth that cannot be substantiated by the acknowledged laws of chemistry. Nothing was required of the imagination, and everything therein so accords with the results, which the experience of the farmer has taught him to expect, that he even might say to himself, "why did I not think of that before?"

Every farmer will tell you that lime acts so like a coat of manure, that he cannot tell the difference. You will be told that a coat of lime will increase the crop, and render worn-out land fertile. When this phenomenon is the result of the application of lime in the caustic state, and follows immediately after the application, depend upon it the land is not deficient in vegetable matter, but having been deficient in caustic and carbonate of lime, the vegetable acids formed by the decomposing vegetables, had accumulated to an extent sufficient to be injurious as an anti-septic. These acids removed by the lime, left the soil at least free from any injurious matter. But if instead of applying it in the caustic state, it had been applied in the form of a carbonate, the same beneficial effect would have resulted, and over and besides, the carbonic acid set free from the lime, would have been equally beneficial to the crop, as though it had been furnished by the decay of manure.

If on the other hand, we do not perceive immediate benefit from the application of lime applied in the caustic state, but such benefit is found to accrue to subsequent crops. In this case the land did not contain sufficient acid to be of any sensible injury, and the land not being very replete with vegetable matter, no apparent change took place until the lime was carbonated. This once the case, the lime by yielding its carbonic acid, came to the aid of the decaying vegetable matter, and there was a consequent increase in the productiveness.

In my opinion, the existence of a certain quantity of lime in the soil, is a *sine qua non*. Without lime the process of *eremacausis* will soon be arrested, and no valuable plant can be cultivated. I make no doubt that other alkalies might be substituted, so as to render small experiments successful, but the alkaline carbonates, are, generally, too soluble to remain

*Har. Treatise, p. 360.

long in the soil without being washed away, and such other than the carbonate of lime, as are not so soluble, are in themselves of a nature injurious to the plant. Very little lime is needed to perform this important duty.

I have often remarked with what seeming confidence some of the learned gentlemen who undertake to analyse a sample of soil for the sum of five dollars, to be paid by a confiding farmer, report the result of their labors, and then vouchsafe to give their advice founded on the analysis. In the April number of 1852, of the *Working Farmer*, is contained one of those singular productions from the pen of Prof. J. J. Mapes.

The learned Professor first states the result of the analysis as follows:

"Mr. ———, WARREN, Somerset Co., N. J.

DEAR SIR:—The following is an analysis of your soil, made by Mr. W. H. Bradley, as per column No. 1. The necessary amendments are given under No. 2.

Analysis.	No. 1.	No. 2.
Organic Matter,	.60	10.
Silica,	87.12	
Alumina,	8.35	
Iron and Manganese,	2.10	
Lime,	.45	3.
Magnesia,	trace.	
Sulphuric acid,	.25	2.
Phosphoric acid,	.05	5.
Chlorine,	—	2.
Potash,	.07	3.
Soda,		4.
Carbonic acid,	.81	

You will perceive by the above that your soil is deficient of

- | | |
|--------------------|---------------------|
| 1. Organic Matter, | 4. Phosphoric acid, |
| 2. Lime, | 5. Chlorine, |
| 3. Sulphuric acid, | 6. Soda, |
| | 7. Potash. |

If we assume that an acre of ground contains 30,172 bushels of soil, each bushel weighing 90 pounds, we will have 2,715,480 lbs. of soil, and if it contains 45-100 of lime, we will have 12,200 lbs. of lime to the acre, (equal to 160 bushels.) But we see by the second column, that the learned Prof. has set down the required amount at 3-100, or in other words, at 81,464 lbs. We then must supply 69,264 lbs., which would be no less than 1,086 bushels of lime.

Experience has taught the farmer that a dose of fifty bushels of lime will be a sufficient dressing for almost any land. If such is the case, this soil already contains more than three times the required amount. By the analysis, this soil contains 162 bushels to the acre, and yet the learned Prof. says that lime is deficient.

The reader will perceive that no care has been taken, in making this analysis, to ascertain in what state this 162 bushels of lime already in the soil existed. No attention is paid to its state of combination. We have carbonic acid, .81, more than enough to saturate the whole of it. If this lime was then a

carbonate, surely any small addition such as is usually made, would not be of much utility. But herein is the difficulty. These examinations, (for I will not dignify it by the name of an analysis, when any gentleman devotes no more than five dollars worth of time and labor to it,) are entirely useless, and only calculated to lead persons into error. If the reader will add up the sum of the constituents, he will find that they produce 99.80, and that the learned gentleman reports to have found a trace of magnesia. This latter is to account for the 20-100 missing in the sum total. The operator must have acquired an extraordinary degree of exactitude in his chemical manipulations, to have been able to arrive at such a result, without compiling it from many trials, and averaging the errors. But at five dollars no man can make the salt that it would take to his bread, even to make one analysis of a soil, much less to make twenty, and by averaging the differences, be able to bring it out like a balance sheet, with nothing carried to profit and loss. To ascertain any proportion below 1-100, requires the most delicate kind of manipulation, and is attended with much labor, and can only be relied on when repeated trials have been made.

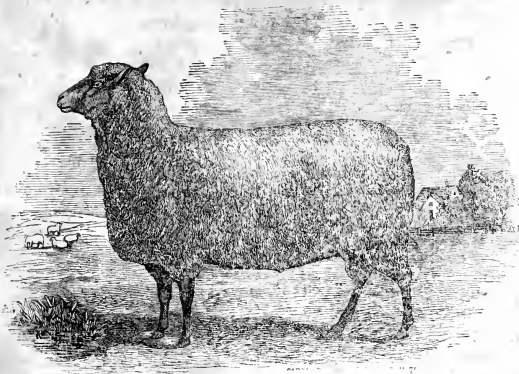
If the 162 bushels of lime already in this soil are insufficient, it is not because that amount of lime would not answer the purposes of agriculture, but because the lime was in combination with something that hindered it from subserving the purposes which I have already laid down in a former article. The gentleman who so positively lays down that it is deficient in lime, does not appear to have taken any of these matters into consideration. If I am correct in my views, the soil may require lime, notwithstanding the presence of even 3-100, provided such lime is combined so as to render it useless to the soil. But much less than one-half of one per cent. of lime combined with carbonic acid will be found to be sufficient. As to any man under the advice of a consulting agricultural chemist, being induced to put lime enough on his land to bring it to 3-100, I have nought to say, but that in my neighborhood it would make quite a sensation.

Some of the most fertile alluvial land in Ohio contains but a shade over one-half of one per cent. of lime, but this lime is a carbonate.

G. BLIGHT BROWN.

WEAVIL.—These troublesome pests may be kept out of grain by using salt. Sprinkle a little fine salt on the bottom and around the sides of the bin as you fill up, and over the top when full. Wheat kept in old salt barrels will never be destroyed by the weavils.—*Agricultor*.

The fat ox that took the first prize at the late Kentucky State Fair, weighed three thousand two hundred and fifty-two pounds.



PURE SOUTHDOWN BUCK,

Owued by Francis Rotch, Morris, Otsego county, N. Y.

We present our readers, with the above admirable specimen and correct copy from a daguerrotype likeness, of a pure Southdown Buck, lately imported, together with three Ewes of the same breed, by Joseph Cope of this county, for Francis Rotch, New York. They were all from the flock of J. Ellman, and having stopped here for a few days, previous to going to New York, gave us the opportunity of having the Buck daguerreotyped.

We are somewhat familiar with fine Southdowns, and had an opportunity some years ago, at the great Southampton cattle show in England, to examine some of their best specimens, but we have not the impression of ever seeing a more finished sheep in all the characteristic points of the Southdown breed, than the Buck now before us. The engraving we consider the best *unflattered portrait* of a pure Southdown, which has appeared in any periodical in this country.

Our friend F. Rotch, in a letter to us from which he has permitted us to make some extracts, says, "as you have seen the sheep, sent me by Mr. Ellman, any comment on my part is unnecessary. I requested him to send me specimens of his very best sheep, and I have reason to believe, that as a matter of *friendship*, he has done so, and I feel under great obligations to him for, thus according to me, what money alone could not have procured. I have seen larger sheep, but I think I have never seen more beautiful or more finished specimens of the breed. As Mr. Ellman remarks, I have yet to learn that size, accompanied by coarseness, is a characteristic of a

true Southdown." These sheep, on the voyage, were accompanied by an English Shepherd, through whose care they arrived in fine condition. In importations of sheep especially, this is the only safe plan, and is the cheapest in the end. It is useless to purchase abroad high priced stock, if they are to have only *chance* attendance and feeding during the voyage.— We lost some a few years ago, who died on the passage, which also happened to some of the large Oxfordshire sheep, imported by Messrs. Reynolds.

This importation of Downs, selected as they have been, with so much care, we consider quite an acquisition to the country.

Alice Maude Strawberry.

We publish two communications respecting this fruit, and refrain from any remarks at present ourselves, till we have heard from J. Slater, and obtained a particular description of its growth, habit and character of the blossom. We have also ordered some plants of him for comparison.

Owing to an accidental confusion of a few papers of our last month's issue with that of the preceding month, some of our subscribers received the wrong number in the January cover. Where such a mistake occurred, we should be obliged by being informed of it, when the correct copy will be immediately forwarded.

Several valuable communications have been received and will appear in our next, having been crowded out by the proceedings of the State Agricultural Society, at its late meeting at Harrisburg.

Horticultural and Floricultural.

For the Farm Journal.

Strawberry, Alice Maud.

EDITORS OF FARM JOURNAL:

In a paper like yours, we expect reliable authority, we can place none in these back woods where writers are as learned as the Botanists of England, and deem that the Strawberry belongs to a class of plants, that always blossoms perfect in male and female organs. From your correspondent's notice of the Alice Maud, I take it for granted, that such is his view. The Alice Maud, I have never seen. I am informed that it is of the Hermaphrodite character, and like the famous Keens Seedling, only valuable as an impregnator, where the sexual character is understood. Till recently, in England, Pistillate plants were unknown, and the result was, that their plants did not average one-half of a crop of perfect fruit. If the Alice Maud is always perfect in both organs, and produces a full crop of large perfect fruit, of good quality, it would be invaluable in England. They have never yet seen such a plant.

A CINCINNATIAN.

For the Farm Journal.

FLUSHING, Jan. 13, 1853.

J. L. DARLINGTON, Esq., Editor, &c.

I notice in your January No., a description of the "Alice Maud" Strawberry, by Mr. John Slater. That statement does not apply to the variety named, and he must have some other variety under the name designated. The "Alice Maud" has been most fully tested by Mr. G. W. Huntsman of this town, and myself. It is an early berry, of rather large size, dark color, lying on or very near the ground; the plant is very unproductive, producing usually but two good sized berries to a plant, and sometimes but one large berry.—It was cast out by every connoisseur here many years ago, *as worthless for its barrenness*; and this has been the case with *every Hermaphrodite variety hitherto introduced from England*. It would have been well if Mr. Slater had stated the sexuality of his Strawberry, as that might guide one in deciding upon its true name, and as I have a specimen Strawberry Garden containing every estimable variety that has yet been tested, he would be able to decide upon its true name by inspecting my Collection at the fruiting season. I am preparing an article for the Horticulturist descriptive of the characteristics of "The Strawberry," and shall enumerate therein all the varieties that are truly valuable, with descriptions, for it is full time that the trash should be exterminated, and that judicious selections based on sexuality should replace them.

Yours, very respectfully,

WM. R. PRINCE.

Dwarf Pear Tree on Quince Stock.



The annexed is a specimen of a Dwarf Pear Tree, of Louise Bonne de Jersey variety. We have before urged in the pages of the Farm Journal, this method of cultivating the Pear, and the annexed will give a fair idea of a dwarf tree in fruit.

It offers several great advantages over the ordinary mode on pear stock.

1st. They are more hardy, and less liable to blight.

2nd. Some varieties are of finer flavor and more perfect on the quince, such as Duchesse d'Angoulême, and White Doyenne.

3d. They come into bearing much sooner; generally the second season after they are planted, and often the first.

4th. They admit of close planting, eight to ten feet apart, and thus return much larger products for the space occupied, answering either for small gardens, quite close to the house, or extended orchard culture between other trees.

The roots of the quince are generally much more fibrous than those of the pear and do not extend so far, but draw their nourishment from a smaller space. They therefore require a rich soil and free cultivation. Short manure should be dug around their roots each fall. This will start them into vigorous growth, the following season, and by pinching off the young shoots to within three or four buds of their base, towards midsummer, fruit buds are soon formed and lateral branches, so as to give the true pyramid shape, and make a thickly set, compact tree. Instead of trimming up as is the usual custom, encouragement should be given to the little spurs to form in all parts of the tree. We have had two and three pears of full size on these little spurs coming out from the body of the tree, not more than an inch long. A small sized tree can thus be made to bear abundantly. The shape and height of the tree is entirely within the control of the cultivator, by the judicious pruning and pinching process. It may be kept at six feet if desired, and we have seen them 15 to 18. There is no more beautiful ornament for a lawn, than a pyramid pear tree well supplied with fruit.

It has been supposed that the Pear on Quince would be a short lived tree. When grafted on the Angers stock, this is found not to be the case, as trees are now growing in some parts of the country 25 years old, perfectly healthy and vigorous, and in England and France have reached 50 years, with no sign of decay.

Engravings of three Pennsylvania Seedling Fruits.

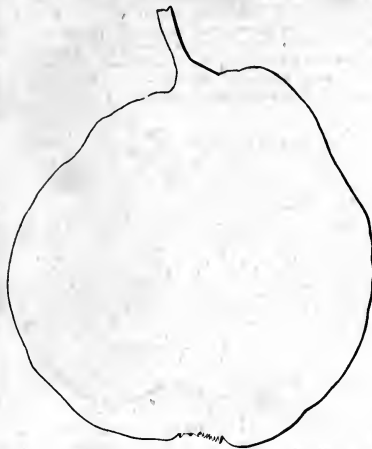


Fig. 1.

Fig. 1. Hosen Shenk Pear, engraved from a drawing by Dr. Brinckle. This Pear is a seedling raised by John Shenk, of Manor township, Lancaster county, supposed to be from the Virgalien or Butter. J. B. Garber, page 197, present vol. of Farm Journal, to whose article the reader is referred, says, "the tree is a vigorous and strong grower, far out growing the old butter pear, and in comparison with that fine old and now almost extinct variety, is superior in every respect; the tree is large and more thrifty, the fruit larger and if possible more luscious, and the tree a great bearer in a favorable soil and situation. It ripens from the middle of August to the middle of September, according to the season."

ty, sometimes elevated on one side; calyx small, set in a contracted basin; core medium; seed long, yellowish brown; flesh very melting; flavor rich and exceedingly agreeable. Ripe last of September."

Fig. 2. Chancellor. This is a fine variety, which has been exhibited for several seasons at the exhibition of the Pennsylvania Horticultural Society, Philadelphia. The original tree, we visited last fall, on the premises of W. Chancellor, on School House Lane, near Germantown, is of large size, and appears healthy and vigorous. It has probably stood there for the last 50 years, and is said to bear abundantly. We annex description by Dr. Brinckle:

"Fruit large, nearly four inches long by three in width; form obovate, or obovate-pyriform; skin green, covered with minute brown specks, and some russet blotches, with occasionally, though rarely, a faint speckled brown cheek; stem one inch long, rather thick, and inserted in a small, irregular cavi-

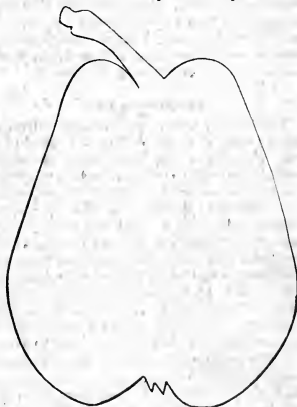


Fig. 2.

Fig. 3, Smokehouse apple. This is the favorite of this section of country, and is esteemed, wherever known throughout Pennsylvania, for its being so long in use, uniformly fair appearance, and abundant and regular bearing. It is a very crooked grower, both in trunk and branches, with dark-colored wood. The original tree grew on the farm of William Gibbons, in Lancaster county, near his smoke-house, whence

its name. Many fruit growers in this State, if confined to only one variety, would select the smoke-house. Size above medium, oblate, regular, mottled and striped with red on a yellow ground; stalk $\frac{1}{2}$ to $\frac{3}{4}$ inch long, slender; calyx closed, set in a wide and shallow basin; flesh yellowish white, rich, aromatic, fine sub-acid flavor. Ripe in October, and will keep for several months.

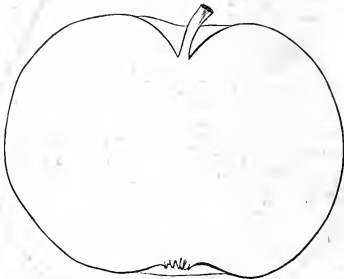


Fig. 3.

For the Farm Journal.

PHILADELPHIA, Jan. 6, 1853.

MESSRS. EDITORS:—

Your interesting reference to the many interesting things which Horticulturists might expect from JAPAN, induces me to copy and send you the following. I find it in the Appendix to Berry's history of the Island of Guernsey, published so long ago as 1815: Have we this flower?

B.

The Guernsey Lily.

This beautiful flower, known throughout England, by the name of GUERNSEY LILY, and cultivated to such perfection in this island, where the natural soil is so congenial as to require but little of the gardener's care, is nevertheless a native of Japan, brought into Guernsey by the effect of accident, more than a century since, when a vessel from Japan, having some roots of this flower on board, being cast away upon this island, they were washed on shore, and buried in the sand, where they remained unobserved till the beauty of the flower attracted the attention of Hon. Charles Hatton, (son of Lord Hatton, then Governor of the Island,) a great florist as well as botanist, who knew the value of the prize, had them carefully transplanted, cultivated the plant himself, and sent roots of it to many botanists and florists in England, where it is much admired, and has to this day continued a great favorite, and is now generally

known after the name of the Island, which has certainly been its foster-mother, but mentioned under the name of *Narcissus Japonicus rutito flore*; by Cornatus, *Narcissus of Japan*, or *Guernsey Lily*, by Evelyn, in his *Kalendarum Hortense*; *Amaryllis Sarniensis*, by Linneus; and by different authors by various names. I was favored with a long descriptive account of this flower, in a work written by Dr. James Douglas, printed in London in 1725, called *Lilium Sarniense*, wherein every particular is scientifically treated upon; but as their technical terms can alone amuse the learned florist and botanist, I shall refer them for this minute detail to the work itself, and content myself with some few particulars respecting the general nature and cultivation of this plant, which cannot fail of being acceptable to all. They have a light earth made with dung and sand, and a little lime rubbish with it does very well, it keeps the root sound; for if the earth be too stiff or wet, you may keep them for many years before they grow. If they are in pots, they should be put in the house in winter, to keep them from the severe frosts, which are apt to rot the roots. The time of moving them is when they have no leaves on the root, that is from June to August; those that come with six leaves seldom fail blowing the next year, and never bloom till the plant has attained that number of leaves. They need not be put into fresh earth above once in two or three years. By this method of management, Fair-

child, a practical gardener of eminence, mentions he has had the same roots blow again in four years time, and particularly recommends that care should be taken to prevent the leaves being bitten by the frost, and by no means to cut them off which weakens the plant so much that they may be kept twenty years, and never produce a flower. Miller recommends for their roots, the following compost: Take a third part of fresh virgin earth from a pasture ground which is light; then put near an equal part of sea sand, to which should be added rotten dung; and sifted lime rubbish, of each an equal quantity. The great business in the culture of this flower, next to a proper soil and situation, seems to consist in giving the plant as much air as possible, and in preserving the foliage in winter from being injured by the frost. They are grown in this Island in beds of many hundreds together, requiring but little care; the flowering bulbs, as soon as the buds make their appearance, are sent to England in great quantities; packed in boxes with moss, when, upon their arrival, they are planted in pots of sand or light loam; they blossom in September, the flowers continue about a month in perfection, and though inodorous, make up for that deficiency, by the resplendent beauty of their colors. The description given by Dr. Douglas accords so well with this superb flower, I cannot do better than give it in his own words: "Each flower when in its prime, looks like a fine gold tissue wrought on a rose-colored ground; but when it begins to fade and decay, looks more like a silver tissue, or what they call a pink-color. When we look upon the flower in full sun shine, each leaf appears to be studded with thousands of little diamonds, sparkling and glittering with a most surprising and agreeable lustre; but if we view the same by candle light, these numerous specks or spangles, look more like fine gold dust." In Guernsey, the same bulb is often known to flower two succeeding years, but this does not generally happen. It is mentioned both by Kaempfer and Thunberg that the Japanese regard the root as poisonous.

For the Farm Journal.

Flower Garden.

It is a common complaint among the ladies in our neighborhood, that they have no success in raising annuals from seed. The reason we would assign for the failure is, that they are too late in sowing them; perhaps, a few practical hints on the subject would be acceptable at this time. The plan we find most successful is to get a common garden frame or box sometime in March, place it sloping towards the south. Seeds of the following varieties we have found very suitable for small gardens: Caudytuft, Rose, Purple & White, Sweet Alyssum, Mignonette, Phlox, Dromondii, Nemophila Insignis Maculata, Dwarf French Marigold, German Aster, ten week stocks,

Linna Elegans, Balsams, Marvel of Peru. Fill some flower pots within an inch of the top with light rich soil, sow the seed and cover it lightly with fine soil, place them in the frame, keep the sash closed till the seeds germinate; if the surface of the soil appears dry, give a slight watering when the plants have grown two or three inches, fill the frame with good soil to six inches from the glass, plant out the seedlings two or three inches apart, give them a watering, close the south end, shade them for a few days till they have taken fresh root, then give them plenty of air on clear days. By this means, good strong plants will be obtained for early blooming. For climbing varieties, we would recommend Sweet Peas, Cypress Vine, Morning Glory, Ipomea Creulea and Coccinea, as very showy and easily obtained by sowing the seed in the open ground. There are other things easily obtained and worthy of cultivation, and will remain much longer in bloom than annuals, such as Verbenas, of various colors, Petunias, do., Heliotrope, Scarlet Geranium, Scarlet and Blue Sage. It is common to see all things planted together in beds or borders, but they are much more attractive if planted in beds or masses, each kind by itself, contrasting the colors as much as possible. We would also recommend for edgings of flower beds, the Sweet Scented Violet, the Garden Daisy, Dwarf Blue Iris, Thrift or Sea Pink, as very suitable. No garden should be without some Perennials, such as Dahlias, Holyhocks, Phloxes, Chrysanthemums, Sweet Williams, Pinks and Carnations, Primrose and Polyanthus, Snap Dragon, Campanula, Foxglove, and, as yet, nothing has been said about Roses. We will name a few remarkable as free bloomers, Souvenir de Malmesbury, Mrs. Bosanquet, Pale Blush changing to White, Hermosa, Pink, Monthly Cabbage, Deep Rose, Julia Fontenelle, Dark Red, Agrippina, Crimson La Reine, Rose Lilac, Marquis Beella, Light Pink; the above are hardy bush Roses growing four feet high; for running Roses, we would recommend for covering arbours, Queen of the Prairies, Pink, blooms once a year; for ever blooming varieties, Lady Washington, Pure White, Jaune Desprez, Rosy Buff, Souvenir de Anselme, Bright Red, Glorie de Rosamene, scarlet. In addition to Roses, we would add the different varieties of Honeysuckles, and some flowering Shrubs, especially the following: Weigelia Rosa, Spirea, Revesii and Prunifolia are well worthy of room in every flower garden. If these rough notes should be acceptable, perhaps we may offer a few remarks about those beautiful Tulips, Hyacinths, Narcissus, Crocus, and Snowdrops, that appear as soon as the snow is gone.

A LOVER OF FLOWERS.

The Pig population of the Mississippi Valley is estimated to be 40,000,000,

For the Farm Journal.

Ornamental Gardening.

MR. EDITOR:—

In your last number, I see some very excellent remarks on the culture of fruits, flowers and vegetables. Should you think the following, (in my opinion,) necessary accompaniments, to secure in the first formation of a place, regularity in the shape of a pleasant landscape, or of a neat flower garden worthy of a place, you are welcome to them. To accomplish this is one thing and to desire it is another. How often do we see owners of property in the country, not to speak of the suburbs of our towns, at a great cost, employing inexperienced men, calling themselves Gardeners, who go to great labor in *murdering nature*, turning that into a stiff, unseemly mass, which in the hands of skillful workmen, would have been advantageously and economically made pleasant to the eye, as well as saving money in the purse.

The most striking success in ornamental Gardening, is where the effort has been to take advantage of nature and turn her to good account, not to produce something grotesque and unnatural. Let the proprietors of land about improving their grounds, apply to nursemeymen, and make them responsible. These often have experienced men in their employ, or can refer to them, by which plan, work would be more judiciously done, and the responsibility lay where it could be borne.

There are three distinct styles of Gardening, each differing in DESIGN, City or Street Gardening, Suburban, and the Landscape style, adapted for country seats. For the first of these I will not travel out of your goodly Borough. It is the prevailing practice to have a grass plot interspersed or rather dotted with roses, chrysanthemums, &c. I like to see these miniature lawns, green, which is always pleasing, but to have the natural beauty of it destroyed, by these strange dottings of plants here and there, with little circles of earth, rising round their roots like mole-hills, is certainly not in good taste, and only wants to be noticed to be exploded.

Do not let me be understood, as wishing to see lawns without such furniture. Nothing is more desirable than to have choice and well assorted varieties of plants, on these little lawns, along our streets, but let beds be formed for them, cut with neatness out of the grass, and on these beds *clump* the flowers together. Thus do we secure the grand object, namely, a flower Garden in its proper place, alike proper for the culture of the flowers, and also free from the Gardener's scythe, when mowing the lawn.

In a future number I shall take up the proper formation of a suburban Garden, and may perhaps approach to the more difficult and wider field for a Landscape Gardener, in the formation, planting and laying out the Grounds for a country seat.

SCOTICUS.

Roses.

The following remarks on the classification of the rose, with a description of their signs of distinction, may perhaps be of some interest to your readers. They are from the *Garten und Blumen Zeitung*.—

M. Carriere divides Roses into seven main classes:

1. Perpetual or Portland Roses.
2. Hybrid Perpetuals from Portland.
3. Hybrid Perpetuals from Bourbon.
4. Bourbon Roses.
5. Noisette Roses.
6. Bengal Roses.
7. Tea Roses.

SIGNS OF DISTINCTION.

CLASS 1.—*Perpetual or Portland Roses* have fine short thorns, which appear very close together, cover the branches almost entirely, and give them a brownish appearance. The branches grow erect. The flower-stalks are short and stiff, and each of them supports usually one flower, which has a somewhat lengthened calyx. For example: Duchesse de Rohan, Julie, Krudner, Bernard, Favorite, and others.

CLASS 2.—*Hybrid Perpetuals*, from Portland—These produce erect growing branches, and are covered with hard thorns, which vary in size and strength. They assume the same growth as the Portland Roses, have likewise a lengthened calyx, but on the top of the branches there are sometimes one, three, or seven flowers, forming a stiff and erect bouquet. Rose de Quatre Saisons may be taken as the type of their growth and their flowers; also, La Reine, Baronne Prevost, Jaques Laffitte, Madame Laffay, Duchess of Sutherland, Amandine, Louis Bonaparte, Clementine Seringe, Gloire d'Angers, Comte de Montalivet, &c.

CLASS 3.—*Hybrid Perpetuals*, from the Ile-Bourbon—It seems that plants of this class keep the balance between Perpetual and Bourbon kinds: they approach, however, in appearance, more to the latter. The sepals of the calyx are generally very strongly fimbriated. The rounded form of the calyx is also another sign by which they may be distinguished from the Portland hybrids. An irregular and intricate position of the branches gives them a peculiar appearance. Examples are Clementine Deval, Comte de Bobinski, Ernestine de Barante, Colonel Foiss, Géant des Batailles, Vicomtesse de Belleval, &c.

CLASS 4.—*Bourbon Roses*—The wood of these is smooth; their branches are sometimes short, terminating with a single flower. But the buds of some kinds are strong, and produce vigorous shoots, on the tops of which appear from three to twelve flowers. The thorns at the base are strong, curved, and placed at some distance from each other. The sepals are oval, rounded, strong, fimbriated, smooth and dark-green. The calyx is rounded. It often happens that the branches of some kinds in this class grow horizontally. Examples: La Reine des Ile Bourbon, Madame Desprez, Charles Souchet, Paul Joseph, Souvenir de la Malmaison, Souvenir du 4 Mai, Remond, Mrs. Bosanquet, &c.

CLASS 5.—*Noisette Roses*—Their foliage has much resemblance to that of the Tea Roses, but their branches are more vigorous, much longer, and terminated with numerous flower-buds. The bark of the branches is smooth and thorny. Examples: Lamarque, Ophyrie, Aimée Vibert, Rose Mille Ecus, Noisette Desprez, &c.

CLASS 6.—*Bengal Roses*—In this class the branches are nearly without thorns, the bark is smooth, the sepals are more or less prolonged and fimbriated, the branches seldom bear more than one flower. The ca-

lyx is rounded, the flowers have nearly always color, whilst those of the Tea Roses, (with which this class is in close relationship) are, with few exceptions, pale white or yellowish. It is also to be observed, the flowers of the Bengal Roses are very seldom scented. Examples: Beugale Ordinaire, Cramoisie Superieure, Prince Eugene, Eugene Hardy, Beaucarnin du Luxembourg, Augustine Hersan, &c.

CLASS 7.—*Tea Roses*.—The branches have a very smooth bark, and have not many thorns. The leaves are glossy, and the flowers appear on the top of the branches, which are slender and not very long. In most cases, the weight of the flowers bends the branches, so that only their under-side is seen. Vigorous examples produce sometimes stronger shoots, which are not so flexible, and bear three or often five flowers on their end, as Devonensis, Safrano, Souvenir d'un Ami, Vicomtesse Decazes, Eliza Sauvage, Bures, Goubault, Moire, &c.—[*Gard. Jour.*, 1852, p. 724.

Prospects of the Farm Journal.

We in this number commence with an improvement in our paper, by transferring all our advertisements to the cover, which will add about four and sometimes more additional pages of reading matter to each number. This has involved the expense of a new font of type, and very considerable expense in other respects, but we consider it will greatly enhance its value to our subscribers, and when bound make a much more valuable volume, by embracing only reading matter, without the advertisements.—The latter, it will be observed, are printed in neat, clear style; our circulation extends through every part of our own, and considerably into other States, and offers a valuable medium of advertising on all matters pertaining in any way to Agriculture and Horticulture.

The Farm Journal is now permanently established at West Chester. It is the only strictly Agricultural paper in Pennsylvania. The present proprietors undertook it with the determination, as far as in their power, to make it fully equal to any Agricultural paper in the country, and worthy of the patronage of the farmers of our own State. We acted on the presumption that there was enough Pennsylvania feeling, and State pride, to sustain a good paper within our own borders, in preference to those published in other States, if it was as well conducted.—Not that we wish to object to our farmers taking these others, *by no means*, but only that they should not be the means of excluding our own Farm Journal. There are eleven or twelve Agricultural papers published in New York, and a very material part of their support comes from Pennsylvania. We do not ask for subscriptions, as a gratuity. We expect to give the worth of every dollar we receive. Those who think it is not worth the price of subscription (only 75 cents to clubs) had better not take it.

We also hope to be assisted by many of the able pens throughout the State, resuming their correspondence in its pages, and to those who have heretofore

written for it, as well as to others who have facts or information of value, in any department of Agriculture or Horticulture, we now tender an invitation to send us their articles for publication.

We wish to make the Farm Journal emphatically a Pennsylvania Paper. We have the means of doing this if properly sustained, by a little exertion on the part of those who think the effort worth making. If our friends in any part of the State would get us up clubs of subscribers in their respective neighborhoods, it would much assist us in showing that our efforts to benefit the farmers' interests are appreciated.

Portraits of Improved Stock.

On account of the condition animals are usually in at this season of the year, it has been thought best to postpone for a time, the illustrations and portraits which we have in prospect for the pages of the Farm Journal. Some of the very best animals in the country, of various breeds, are only being delayed for a milder season, till they can be daguerreotyped. We have determined that hereafter, no mere artistic figures, and highly flattered, unnatural specimens of stock, which have so abounded in some of our agricultural periodicals, shall be admitted into its pages. If a high-priced Cow, or Bull, or Sheep is so deficient in good points and general figure, that it will not do to tell the truth in a *real portrait*, they had better be sent to the butcher. A \$10 note may be thus saved in paying an artist, who to gratify the wish of the owner, to make an improvement on nature, might as well make the drawing from *description*, without ever seeing the animal.

As we remarked in a former number, when introducing the Southdown Sheep of John Worth and Joseph Cope, (which, by the way, had not justice done them by the engraving,) there is much difficulty in getting an artist sufficiently acquainted with the points of good stock, to be able correctly to draw an animal portrait from life. For this reason, as regards the Pennsylvania Farm Journal, we shall exclusively adopt the daguerreotype process, it being always easier to *copy* from it than to originate correctly. Where the intention of the owner is truthful there will be no difficulty. Were this always the case, there would be no such caricatures as we often see. Francis Rotch, of New York, so widely known as an experienced and successful breeder of both sheep and cattle, in a recent letter to us, coincides so fully with our views, that with his permission we make some extracts from his letter, with his remarks on the portraits of some of the animals figured in the transactions of the New York State Agricultural Society. Some of these appear to be unfaithful likenesses in *not coming up* to the reality. In this case, as in the other of *going beyond* it, they had better not be published.

"Never was a greater misnomer than '*illustrations*' when applied to the representation of animals, as put forth in most of our agricultural periodicals. I know not why a man should not feel himself as responsible for the truth of the pencil as the pen, (if degrees in truth were admissible,) I should say he is yet *more so*, inasmuch as he professes to resort to it by way of *illustrating* a subject better than it can be done by the pen.

"In many instances the pictorial additions to a publication are not important to the work itself—they are often but embellishments; but I take it, such is not the case when a State Agricultural Society publishes its doings and its awards, and gives *portraits* of the animals to which they have adjudged premiums, as the best of their kind.—[See the transactions of the N. Y. State Agricultural Society for 1851.

'Lord Eryholme' is evidently a sick animal.

'Esterville' is quite poetical, and delights the imagination.

'Azelia,' I must suppose, has had great injustice done her, for such a head and such coarseness, could hardly claim the first premium in any society; whereas I have been assured by those who have seen her, that she is a very superior cow, though not quite so fine in the head as would be desirable.

'Apricot' I doubt not, is well and truthfully represented. The engraving tells you she is young and mature, but of good promise.

I now come to the premium 'Devon Cow,' and only wonder the owner could do his herd such injustice as to publish so gross a caricature; for America, I will venture to believe, does not possess more finished or better animals than belong to it; and the New York Agricultural Society, however its committees may blunder, would hardly endorse this engraving as representing the best Devon Cow on their ground in that year. Yet this very representation is put forth by the Society by way, I presume, of instructing and teaching the people what is the best model of a Devon.

Lastly the Hereford Bull, 'Tromp,' showing all the characteristics of his breed, and *looking in the engraving* as though he well deserved the premium he was awarded, strikes me as both true and artistic. Mr. Forbes, the artist, drew, I doubt not, what he saw before him, and has been well seconded by Mr. Carson, the engraver.

While I condemn those attempts at portraits which libel their originals, we must admire the perfect integrity of purpose and truthful intent of their owners, in thus entrusting the delineation of their beautiful stock to the artists, without oversight or correction.

These stand in strong contrast to the more *business-like* breeder, who orders his animals to be drawn after his *own conceptions of the beautiful*, making them what he would have them to be, rather than what they are, and puts them forth as *portraits*.

I cannot, however, turn from the illustrations in the Transactions of 1851, without noticing the beautiful and artist-like execution of the portraits of a French Merino Ram, by M. Ponsa. I have seen nothing in our Agricultural Periodicals so excellent in either drawing or cutting. The artist's name, who made the sketch, I am sorry to say, does not appear.

We hope to make the Pennsylvania Farm Journal a complete Herd book for our State, and if our suggestion to breeders in the last number, in respect to registering pedigrees, should be carried out, accompanied as our pages will be by appropriate illustra-

tions of stock, we think it will make the most complete and cheapest Herd book that could be gotten up.

We have made arrangements to have engravings correctly executed, and if persons who choose to incur the expense of this, the very best kind of an advertisement of their choice animals, will forward us their daguerreotypes, we will attend to the engraving, and see that a *faithful copy* is taken.

PROCEEDINGS OF THE SECOND ANNUAL MEETING OF THE PENNSYLVANIA AGRICULTURAL SOCIETY.

HARRISBURG, TUESDAY, JANUARY 18, 1853.

In accordance with the fourth section of its Constitution, the Pennsylvania Agricultural Society, met on the third Tuesday of January, 1853, in the Hall of the House of Representatives.

A quorum of members being present, the meeting was organized by the motion of J. S. Haldeman, electing C. B. Tregeas Secretary pro tem.

On motion a committee of three, consisting of D. Mumma, Jr., A. S. Roberts and J. Konigsmacher, were appointed to invite his Excellency, the Governor, and the heads of Department, to be present during the meeting.

A. O. Hiester, Chairman of the Committee on Field Crops, appointed for the last Annual Exhibition, made a report which, together with its recommendations, was, on motion adopted.

REPORT OF THE COMMITTEE ON FIELD CROPS.

The Committee on Field Crops in this, the first report, beg leave to congratulate the Society, that whilst the last census presents our noble State as first amongst her Sisters in some of the most important staple crops, in the aggregate, the interest excited by our Agricultural Exhibition and the competition elicited by the offer of honorable premiums, has brought to our knowledge another fact, that without extraordinary attention, and without any idea of competing for premiums, at the time of planting and during cultivation, we are also first and foremost among our sister States in the production of particular field crops.

The dissemination of Agricultural information generally, and the reports of special results from particular modes of plowing, planting and manuring, as sent forth by the Society, must exert a most healthful influence in awakening the energies of the farmer, and exciting a spirit of laudable rivalry and emulation throughout the State. And if such are to be the results of our efforts, we may with great propriety claim continued liberal patronage and public favor.

The Committee would most respectfully at this stage of their report, recommend a revision of the premiums for field crops, so as to excite greater public attention and competition, and that premiums hereafter to be dispensed in a more liberal and extended manner. We owe it to the cause in which we are engaged, and our present resources, and future prospects will justify the additional inducement. The father of his country has written, and it has now become a household saying, that the man who can make two blades of grass grow where but one grew before, should be considered a public benefactor. Let us liberally reward the man, who by his industry, skill and science, makes two bushels of wheat grow where but one grew before, and generously communicate to the society his manner of doing it, so that

we may lay it before the public, thus aiding in an important particular the great object we have in view, the advancement of the agricultural prosperity of the State.

The Committee report that there are four applicants for premiums on Corn, who conform to the requirements of the Society, viz:

1st. George Walker, of Woodbourne, Susquehanna county, Pa., who produced, as per accompanying statement, 160 bushels per acre on five acres, and twenty tons of superior Pumpkins.

2d. Dr. John A. McCrea, of Whitmarsh, Montgomery county, Pa., 93 bushels of shelled Corn per acre, on eleven acres and twenty-five cherches.

3d. Jno. B. Bitzer, West Earl township, Lancaster county, eighty-five and three-fifths bushels of shelled corn per acre on five acres.

4th. Jno. B. Bitzer, of West Earl township, Lancaster county, ninety-six and three-fourths bushels of shelled corn on one acre.

For Wheat there are two applicants for premiums, who produced, as per accompanying statement,

1st. Reuben Weidler, Bareville, Lancaster county, forty bushels and twelve and three-fourths pounds of wheat on one acre.

2d. Joseph Lundule, of Lycoming county, thirty-two bushels White Blue Stem wheat to the acre, on sixteen acres.

Benjamin Buckwalter, Lancaster county, produced seventy-three and one-third bushels oats per acre on eight acres and 123 perches.

John Wilkinson, Mount Airy Agricultural Institute, Philadelphia county, Pa., produced 1017 bushels Carrots on one acre.

*Henry A. Carpenter, Lancaster county, one-fourth acre Sugar Beets: one-fourth acre Ruta Baga.

*J. H. Smith, Lancaster county, one-fourth acre field turnips.

The Committee regret that in so large a Commonwealth, and such an extensive field for competition, there were not more applicants, although it was to have been expected, that one or two seasons would elapse before farmers would feel sufficient emulation to accurately survey and measure an entire crop for so small a premium as is awarded.

The written statements of competitors are very satisfactory for first reports, many of them being full and specific upon every point, except it be the nett cost per bushel or per acre. We have no doubt this defect will be corrected in future. The Committee deem the rules of the society to have been complied with by most of the competitors, and we find no difficulty in making the awards. After a careful examination and comparison of the different statements and samples, which are herewith submitted to the Society for examination and distribution, the Committee award as follows:

Geo. Walker, first premium for best five acres of corn, \$15 00.

Also a complimentary premium for the same, of fifty dollars.

Jno. A. McCrea, for second best five acres of corn, \$5 00.

J. B. Bitzer, first premium, for corn on one acre, \$8 00.

R. Weidler, first premium, for one acre of Wheat \$8 00.

John Wilkinson, first premium for carrots on one acre, \$8 00.

*No certifiates of yield, or mode of culture.

Also, a complimentary premium for the same, of fifteen dollars.

A. O. HIESTER,
MICHAEL DOUDLE, } Committee.
JACOB FRANTZ,

SECRETARY'S REPORT.

The closing of the second year of the Pennsylvania State Agricultural Society, furnishes the evidence that its organization has been for good, and that it has received attention from its friends, commensurate with the importance to be attached to an institution intended to foster and improve Agriculture, Horticulture and the Domestic and Household Arts. It has also afforded sufficient proof that there does exist in Pennsylvania, all the elements required to carry forward and foster successfully a State Agricultural Society.

The proceedings of the year, which are those of the Executive Committee, have been nearly altogether of a business nature, and are made up from the minutes of said committee, which has been in session eight times since the last annual meeting of the Society. A very considerable amount of time and labor is required from, and has been cheerfully given by the members of the Executive Committee, upon whom has devolved all the business of the association.

The following resolution was passed by the Executive Committee, at their meeting on the 10th of December, 1852:

"Resolved, That experience has shown that our Annual Exhibitions have heretofore been held too late in the season, and that our next Annual Exhibition and Cattle Show shall be held on Tuesday, Wednesday, Thursday and Friday, the 27th, 28th, 29th and 30th days of September next."

In accordance with the Constitution of the United States Agricultural Society, which makes provision for the establishment of a Board of Agriculture, to be appointed by the respective State Agricultural Societies, the Executive Committee has appointed Fred'k Watts, John H. Ewing, and H. W. McAllister, members of the said Board of Agriculture.

It was also resolved that the thanks of the Society be tendered to the Agricultural Society of Lancaster county, for the industrious attention which they have given to the interests of the State Society during its exhibition, and especially to their Executive officer, Daniel Rhoads, for his untiring energy in executing the orders of the Committee of Arrangement.

The Committee appointed to receive proposals from places competing for the next Annual Exhibition, reported progress and had leave to report at the next meeting of the Committee.

The Committee appointed to audit the accounts of the Treasurer, reported and certified to the correctness of the same.

It is to be regretted that none of the different county Agricultural Societies in the State, have complied with the Act of Incorporation of the State Society, which requires that they shall annually transmit in the month of December, to the Executive Committee, "all such reports or returns as they are required to demand and receive from applicants for premiums, with an abstract of their proceedings during the year."

An adherence to that part of the law requiring them to make report of their yearly proceedings, would enable the State Society to acquire a great store of agricultural information, from the various districts, and a sufficiency of agricultural statistics to warrant the Legislature in following the worthy ex

ample of the States of Massachusetts, New York, Ohio, Michigan and Maryland, who have had published three very interesting and valuable works called the "Transactions" of their respective State Agricultural Societies.

There are nineteen Agricultural Societies in the State, very few of which had any conference with the State Society, on any subject of mutuality, and nearly all have neglected altogether the importance of concerted action, in the many ways that would facilitate both in contributing to the husbandry of the country.

The Perry County Agricultural Society was represented at the late State Fair, by a large display of fine fruit, and articles of domestic manufacture, to some of which premiums were awarded, and others were spoken commendably of by the Committees. The Executive Committee passed a resolution tendering their thanks to the Perry county Society, for the handsome contribution they made to our Annual Exhibition, and requested other county Agricultural Societies to follow its example.

The second Annual Exhibition, held at Lancaster, was by far more extensive than the one of the preceding year, and for a SECOND Exhibition was probably unprecedented in the history of State Agricultural Societies. The display of animals and articles from the various parts of the State was very creditable, and the numbers entered for competition on the books of the Society, was a large increase over the former occasion, clearly showing that the zeal which was manifested for a first Exhibition had not in the least abated by the lapse of another year. One striking feature of the Fair, was the valuable specimens of pure bred Fowls, which were exhibited in great numbers, and deservedly attracted marked attention, while they showed the importance of every farmer looking to the interests of his poultry yard.

The Plowing Match was one of considerable interest, and the strife among the plowmen who had entered the contest was characterized by a good feeling, and a generous emulation as to the reward of their labors.

The several departments of the Exhibition were all well supplied with contributions, and presented their usual attractions. The new and interesting feature of the Exhibition made up by the collection of valuable wools, owned and presented by Peter A. Browne, Esq., of Philadelphia, afforded quite a treat to the wool growers, who had the pleasure of examining the rare specimens, and suggests to the Society the importance of aiding this distinguished gentleman in his new and laudable endeavor to improve the wool culture, by pointing out the distinct difference between hair and wool, or between wool that will, and that which will not felt or shrink together.

The Exhibition was deficient in the customary annual address, owing to the engagements at the time, of the gentleman who had been invited for that purpose.

The Fair ground, situated on an eminence scarcely a mile from Lancaster, and commanding a fine view of the Conestogo Valley, the Columbia Railroad for several miles, and the magnificent farms which surrounded it on all sides, was a beautiful location, and for the purposes of an Exhibition, every way desirable.

The Committee of Arrangement, composed almost exclusively of members of the Lancaster Co. Agricultural Society, upon whom devolved the many duties to be performed, both before and after the fair, deserve the thanks of the Society for the untiring and

disinterested attention given to the interests of the State Society during the exhibition.

The registry of the names of the members shows that they have been more than doubled since the last annual report, there being now over four thousand, two hundred members, all of whom are regularly entered on the books of the Society, and alphabetically arranged, with their post-office address.

Certificates of life membership have been issued to James Gowan, of Mount Airy; P. B. Savery, of Philadelphia, and S. C. Stambaugh, of Lancaster. This mode of strengthening the treasury of the Society has been less successful than might have been expected, for where it is considered that the fee for life membership is only ten dollars, one would readily believe that the dictates of economy would induce life members by the score.

Two years have expired since the organization of this Society, and would it be improbable to suppose that eight years hence, hundreds who are members now will be members then? Who then can account for there being but four life members now, when eight years more shall have expired? All who continue members for that period will have paid the whole amount of the fee for life membership, and at the end of that time will be still contributing their dollar yearly. It might not be improper here to suggest that the Vice President be desired to invite life-members from their respective districts. Each Vice President furnishing ten life members, would give the Society \$2,500, or nearly double the amount of premiums paid out the last year.

It will be seen by the Treasurer's report that there are funds in the treasury to warrant a very considerable enlargement of the premium list, and an increase of premiums for the next fair, which is contemplated by the Executive Committee.

The reports of the Judges who served on the several committees for the last Exhibition, (of which three thousand copies have been published, and distributed among the members of the Society,) show a decided improvement on the part of exhibitors in preparing statements in regard to culture, methods of manufacturing, &c.

It will be seen also that the Executive Committee have increased the number of days for holding the next Exhibition to four, so as to enable exhibitors to have entered and arranged in due time, all things intended for competition, and to give the Judges more time in their adjudications; and to enable them to give that attention to the making up of their reports, which their importance to competitors and to the Society so justly demands.

In submitting such abstracts from the records of the Society as have been designated, and which are hoped will contribute to the interest of our Annual Meeting, I cannot refrain from congratulating the members upon the successful effort which has been made by them to firmly establish in Pennsylvania an institution, whose two years existence fully demonstrates that it is rapidly approximating to an equality with kindred associations, whose beneficent influences have aided agriculture throughout the world.

We have reason to rejoice that as yet no obstacle has been met with to retard the Society in its gradual advancement to the position which it this day occupies; and it is a gratification to know that the treasury of the State has been twice opened in its behalf, and that the Governor of the Commonwealth, in his late annual message, has recommended the appointment of an Agricultural Chemist to act in conjunction with this and the County Societies.

The interest that is felt in every part of the State

to have succeed the first effort calculated to benefit the farmer, the Legislative aid so confidently to be relied on, the members of the Society now numbering thousands, the money in its treasury, and the willingness of almost every one to assist in its promotion, all indicate a permanency of the Pennsylvania State Agricultural Society, which it is hoped will not cease while agriculture contributes to the comfort and happiness of man.

R. C. WALKER, Sec'y.

GEO WALKER'S MODE OF CULTIVATION.—I plowed five acres of green sward for corn in the beginning of May, 1852 and hauled one hundred loads of manure on the same. After the manure was spread the ground was well harrowed, and planted, the last of May, in rows $3\frac{1}{2}$ feet apart, running east and west, from three to five grains in the hill. Two bushels of lime, mixed with three bushels of plaster was applied to said five acres of corn, very soon after it came up. A plow did not enter the field after the corn was planted. The ground was kept loose and mellow, and the grass and weeds subdued by the use of the cultivator; making but little use of the hand-hoe. A specimen of the corn was exhibited at the State Fair, at Lancaster; it being of the white flint species, eight-rowed, small cob, and long ears, more than one foot in length. In addition to the enormous yield of 160 bushels of shelled corn to the acre, the same field, of five acres, produced twenty tons of superior pumpkins, some of which weighed more than forty-one pounds. Said field is situated on one of the highest hills in Susquehanna county, being an oak, pine, beech and sugar maple ridge. Soil, a sandy loam.

All of which is respectfully submitted.

GEO. WALKER.

Woodbourne, Susq'a co., Oct. 14, 1852.

The subscribers have this day examined the corn raised by Mr. George Walker, on his farm, at this place.

We measured carefully, with a surveyor's chain, one square acre embracing an average of the field.

We then counted the hills of corn on each outside row, and found it 125 hills long, by 33 wide. We then selected an average row, and beginning on one side, worked twenty-six hills, which we shelled and measured, and there was a little over a full bushel.

The corn was not dry, and probably will shrink from $\frac{1}{4}$ to $\frac{1}{2}$. The present amount would be 160 bushels of shelled corn—120 of dry, merchantable corn.

Very respectfully,

WILLIAM D. COPE,
A. CHAMBERLIN.

JAMES A. McCREA'S MODE OF CULTIVATION.—The undersigned respectfully presents the accompanying certificates of the measurement of land, and its product in corn, in competition for the premium offered by the Agricultural Society of the State of Pennsylvania.

In this section of our State, such a crop is exceedingly beyond the average, and elicited warm encomiums from all who had an opportunity of seeing its luxuriant growth. The mode of cultivation was that usually employed in this country, viz:

A sod of more than 20 years growth was broken up in March, harrowed thoroughly, then hoc-harrowed and furrowed out for planting 4 and $3\frac{1}{2}$ feet. The corn was planted the first week in May, about two-thirds with Dutton and the rest with mixed variety. My neighbor farmers were of opinion that if the mixed variety alone had been planted, the yield would have been materially increased. Of this, however, I am not satisfied. The irregular outline of the field rendered it impracticable to institute a comparison with that accuracy which should always accompany agricultural experiments, to entitle them to confidence. A given bulk of the mixed variety was found to shell off about 4 per cent. more by measure and 8 per cent. less by weight than the Dutton.

The Dutton corn was selected with reference to its character for maturing early—as the desire was to bring the field back into grass in the shortest possible time.

The unusual character of the autumn, however, defeated the object, and also showed no difference in favor of the Dutton over the mixed variety, on the score of earlier maturity. I may also add, that the fodder was very rank on the

entire field, much of it from 15 to 16 feet high; none under 12 ft. The Dutton corn with us is not often more than nine or ten feet high.

There was no manure employed, and the rapid growth of the crops did not permit it to be stirred more than twice with the cultivator.

JAMES A. McCREA.

Ardenheim Farm, Whitemarsh tp., Mont. co., Pa.

Montgomery co., Jan. 6th, 1853

I hereby certify that I superintended harvesting and measuring the corn crop grown upon 11 acres 24 perches, on the farm of Dr. James A. McCrea, in Whitemarsh township, Montgomery county, and that said crop was 1028 bushels of shelled corn.

JOSEPH NIEMAN.

I hereby certify that I measured accurately the field of corn upon the farm of Dr. James A. McCrea, in August last, and that the same contains 11 acres 24 perches of land.

JOSEPH HUSTON, Surveyor.

REUBEN WEIDMAN'S MODE OF CULTIVATION.—The ground was timothy sod. It was accurately surveyed by William Weidman, on the 1st of October, 1852, and found to contain 15 $\frac{1}{2}$ perches, less 4 $\frac{1}{2}$ perches than one acre.

The mode of cultivation was as follows: Ploughed in the spring, the put in with potatoes, and after they were raised, about 16 one-horse cart loads of manure spread over it, then again ploughed about 8 inches deep and harrowed until in good seeding order; and then sowed in with 1 bu. 3 pecks of what is called the Ohio wheat with drill. The wheat was reaped, shocked, and then stacked and remained there until the 4th day of October, 1852, when it was threshed and yielded thirty-eight and a half bushels by measure; weighed 62 $\frac{1}{2}$ lbs., which makes forty bushels and twelve and two-third lbs. of wheat by weight.

Certified by us, October 18th, 1852.

WILLIAM WEIDMAN,
J. W. LEBER.

Oats raised by Benjamin Buckwalter.

EAST LAMPETER, Sept. 6th, 1852.

This is to certify that the oats field contained 8 acres and 125 perches—neat measure.

Witness our hands, ABRAHAM BUCKWALTER,
BENJAMIN BUCKWALTER.

This is to certify that the above quantity of land produced 640 bushels.

Witness our hands, HENRY GROFF,
BENJAMIN BUCKWALTER.

Description of the Manner in which John Wilkin-son produced his Crop of Carrots, in 1852, measuring 1017 Bushels per Acre.

The ground was a good sandy loam, principally mica and slate; the fertile surface soil about eight inches in depth.

It had been in Lucerne two years previous to breaking up for Carrots.

The sward was turned under nine inches deep in April, following the surface with the subsoil plough, to the depth of six inches more.

Land was manured with four hundred pounds Peruvian guano per acre, and twenty-five two-horse loads of compost, consisting of the scrapings of the manure yards, screenings of guano, decomposed flesh of Horses, Cows, &c., and gleanings from banks of ditches, thoroughly incorporated with the soil. The seed was planted the 3th of May in drill, 2 $\frac{1}{2}$ feet apart, using two pound seed per acre—the variety Long Orange.

They were kept clean throughout the season; were hand-weeded but twice, and cultivated principally with hoes, using a cultivator made by C. B. Rodgers, of Philadelphia, expressly for the purpose; and also subsoiling the surface, three times during the season between the drills, with a light one-horse plow. The crop was harvested the last of November. They were taken out by means of the large subsoil plow, running it seventeen inches in depth.

By the use of the S. S. plow for digging carrots, and similar roots, a strong team will do the work of twenty-five or thirty men, and do the work equally as well as it can be done by manual labor.

I preserve them in pits, cover them with earth, without any other covering. I sell them in the city of Philadelphia for feeding Horses; the price varies from 37 $\frac{1}{2}$ to fifty

cents per bushel. I have sold them this year for 45 cents per bushel, and thus realized upwards of \$450 per acre.

All of which is respectfully submitted to the Committee on Root Crops, of the Pennsylvania State Agricultural Society.

J. WILKINSON,

Germantown, Dec. 22, 1852.

I do certify that I assisted to produce the crop of Carrots grown by Mr. Wilkinson, of the Mount Airy Agricultural Institute, in 1852, and that one acre, surveyed by Mr. L. H. Gause, (Mathematical Teacher of the Institute,) produced one thousand and seventeen bushels, good measure, per acre, of the best shaped carrots, and best proportion of tops, to the roots that I ever saw, and I have been familiar with their production for the past ten years.

I do further certify that this was the largest crop that I ever assisted to harvest, and the extraordinary yield, was owing to the liberal, thorough, and scientific manner in which the crop was manured and cultivated.

S. T. UMAIL.

Sworn and subscribed before me, this 16th day of December, 1852.

ROBT. THOMAS,

Justice of the Peace in and for the county of Philadelphia.

I do certify that I surveyed with a compass and chain, for Mr. John Wilkinson, of the Mount Airy Agricultural Institute, one acre of the ground occupied by his carrot crop in 1852, which he subsequently had carefully measured for the purpose of competing for the prizes offered by numerous Agricultural Societies, and I am satisfied that the survey was accurately made.

L. H. GAUSE, Surveyor.

Sworn and subscribed before me, this 16th day of December, 1852.

ROBT. THOMAS,

Justice of the Peace, in and for the county of Philadelphia.

We have received the Treasurers report of the State Agricultural Society, with the items of expenses and receipts for last year; also the report of the committee on the subject of a State Agricultural School. They shall appear in our next, and we regret having room only for the following resolution in the present number:

Resolved, That an Agricultural Convention be held at Harrisburg, on Tuesday, the 8th of March next, to adopt measures for the establishment of an Agricultural Institution, to be styled "The Farmers' High School of Pennsylvania," with a model farm attached thereto; and that the convention consist of as many delegates from each district as there are Senators and Representatives in the Legislature from the same; said delegates to be chosen by the Agricultural Societies, where such are located, and in other districts by the friends of agricultural education.

ALGERNON S. ROBERTS,

J. CAROTHERS,

JOSEPH KONIGSMACHER,

A. O. HEISTER,

DAVID MELLINGER,

Published by order of the Executive Committee.

ROBERT C. WALKER, Secretary.

HARRISBURG, Jan. 18th, 1853.

ORWIGSBURG, January 13, 1853.

The following is the list of Officers of the Schuylkill county Agricultural Society, elected on the third instant.

President—HON. JACOB HAMMER.

Vice Presidents—JOSHUA BOCK and JOHN J. PAXSON.

Recording Secretary—J. S. KELLER.

Corresponding Secretary—JNO. BANNAN.

Librarian—J. S. KELLER.

Treasurer—W. A. HAMMER.

Curators—J. F. TREICHLER and RUBENS PEALE.

J. S. KELLER, Rec. Sec'y.

Pennsylvania Horticultural Society.

The monthly stated meeting of this society occurred on Tuesday evening, the 21st December, in the Chinese Saloon, General Patterson, President, in the Chair.

The display on this occasion comprised a collection of interesting plants from Mr. Cope's houses. Chrysanthemums from Mr. Parker. Pears in variety from Mrs. John B. Smith, of the following kinds of unusually fine qualities: Doyenne Sieulle, St. Germain, Jaminette, and Glout Morecaus, remarkably fine; from Thomas Hancock, the St. Germain and L'Eschasserie; from Isaac B. Baxter, the Broom Park and St. Germain; from Thomas P. James, the Inconnue, Van Mons, and St. Germain; from N. W. Roe, Winter Bon Chretien. Apples:—from N. W. Roe, Roman Stem and Newton Pippin; from R. Cornelius, Newton Pippin and Hayes; from Mrs. J. B. Smith, Reinette franche and Belle des Cois; from Peter Kuser, a number of seedlings. Of Vegetables—Anthony Felten, Jr., presented a very extensive display, and very fine tables from Robert Cornelius and Caleb Cope. A beautiful basket of cut flowers from R. Cornelius's houses, and a handsome bouquet from C. Cope's.

The following are the awards—By the Committee on Plants and Flowers—For the most interesting collection of plants in pots, to Thomas Meehan, gardener to C. Cope. For the best bouquet to the same; and for the second best basket of cut flowers, to Thomas Meghran, gardener to R. Cornelius. The committee noticed a specimen of *Centradenia floribunda*, a new plant from Mr. Cope's houses.

By the Committee on Fruit. For the best one dozen Pears, to Mrs. John B. Smith's gardener, for the Jaminette; for the second best, to Thomas P. James, for the Inconnue Van Mons. For the best one dozen Apples, to N. W. Roe, for the Roman Stem; for the second best, to Thomas Meghran, gardener to R. Cornelius, for Newtown Pippin. And a special premium of one dollar to F. Guoin, gardener to Mrs. J. B. Smith, for a dish of very large specimens of Glout Morecaus Pears.

By the Committee on Vegetables—For the best and most interesting display by a market gardener, to Anthony Felten, Jr.; for the best by a private gardener, to Thomas Meghran, gardener to R. Cornelius; for the second best to Thomas Meehan, gardener to C. Cope.

Ad Interim Report of the Fruit Committee. The Fruit Committee respectfully submit the following *ad interim* report:

After their regular report had been presented and acted on, at the last stated meeting of the society, on the 16th of November, a specimen of the Belle Angevine Pear was exhibited by Richard Price, which had just been brought from France by Geo. D. Parrish. This specimen was of colossal size, weighing 33 ounces, and measuring six and a half inches in its longitudinal, and four and a half in its transverse diameter, and cost in Paris two dollars and forty cents. Belle Angevine is a fine cooking Pear. A model of it was sent to the society, this season, by Andre Leroy, of Angers, and was exhibited at the recent meeting of the Pomological Society. (It is now on the table.)

From Mr. Johnston—MAMMOTH HICKORY NUTS—grown at Pottstown in this State.

From James C. Vodges—SHELL BARKS—grown near Norristown. These nuts were of immense size, measuring one and three-fourths inches in their longitudinal and one and five-eighths inches in their

transverse diameter. Weight half an ounce—oblong compressed—of fine quality.

From Charles Kessler, Reading—Two varieties of Apples. **THE YOST.** Rather large, two and three-eighths to three and three-fourths wide, roundish oblate, beautifully striped, and delicately mottled with crimson, on a yellow ground; stem short, less than one-fourth by one-sixth of an inch thick, inserted in a deep cavity; flesh yellowish, tender, juicy, pleasant flavor. "Very good" quality.

LONG STEM—below medium; roundish oblong, sometimes angular; skin red, in faint stripes, with a number of grey russet dots; stem long, thin; cavity medium acuminate; basin small, shallow, plaited; flesh greenish white, tender; agreeably subacid flavor, with Spitzenburg aroma; quality "very good." Not the Long Stem described by C. Cole.

From Mr. Houson, Reading—Two varieties of Apples. **Houson's Red;** large oblong, compressed at the sides; skin red, in stripes, yellow at the base; stem short, thick; cavity narrow, not deep, slightly russetted; basin moderately deep, plaited; flesh fine texture, tender, with delightful aroma; quality "very good" at least.

GLORIA MUNDI. Specimens very large and remarkably fair.

From Thomas P. James—Three varieties of Pears. **FONDATEUR DU BOIS;** medium, obovate, juicy. "Very good."

FORELLE OF TAOUT PEAR. Specimen unusually large, and exceedingly beautiful; quality "very good."

St. GERMAIN.—Very fine specimen of this old variety.

From Peter Kuser, of Boyerstown, Pa., through Alan W. Corson. Twelve varieties of Apples, probably natives, as we do not recognize any of them as known varieties, except the Lecker, which is considered a Pennsylvania seedling.

YACUT. Medium, roundish, striped with red of various hues, on yellowish ground; stem half inch long, eighth thick; cavity open, obtuse; basin very shallow, plaited; flesh fine; texture tender, pleasant flavor. "Very good."

No. 2, a seedling. Medium size, roundish, oblate, sometimes compressed; skin greenish yellow, with russet dots on whitish elevations; faint blush to a bright carmine, sometimes in stripes on the exposed surface; stem $\frac{5}{8}$ inch long, by 1-9 inch thick; cavity rather deep, russetted in rays; basin medium, plaited; seed brown, short, plump, obtuse; flesh fine; texture tender; mild, pleasant flavor; quality "good."

MARCK. Large, of fine appearance, conical, angular; skin greenish yellow, with a few russet dots, and on the exposed side a blush; stem short, thick; cavity wide, irregular, deep; basin deeply furrowed; core large, hollow; seed light brown, short, plump, obtuse; flesh fine; texture tender, pleasant; quality "good."

No. 4, a seedling of Mr. Kuser's. Above medium in size, roundish, oblate; skin green with brownish stripes; stem long, slender; cavity acuminate; basin small, shallow, plaited; flesh greenish white, fine texture, sub-acid flavor; quality for the table scarcely "good."

LECKER, described by Thomas as Laquier with synonym *Lucker*. Medium roundish, oblate; skin striped, with crimson on a paler red, with numerous large, light dots; stem short and slender, sometimes stout; cavity russetted, narrow, rather deep; basin wide, deep, plaited; seed dark cinnamon, short, plump; flesh whitish, fine texture, tender, juicy, delicate aroma; quality "good" at least.

LONG KEEPING. Very small, roundish, stripes of

dull red on greenish ground. Its small size and uninviting exterior will probably prevent its general cultivation.

JOEL, a seedling of P. Kuser. Size below medium, somewhat oblate, usually compressed; skin greenish yellow, with small patches of green and elevated russet dots, and sometimes a faint blush; stem short, rather thick; cavity deep, narrow, russetted; basin narrow, of moderate depth, slightly plaited; flesh greenish yellow, rather dry.

BARR. Size medium, variable in form, usually roundish oblong, inclining to conical; skin striped, with red on a greenish yellow ground, sometimes a few small patches of green russet; stem short, rather thick, sometimes fleshy; cavity usually rather wide and deep; basin shallow, plaited; flesh greenish white, fine texture, tender, but deficient in flavor.

GIANT. Large, roundish, tapering to the crown; skin striped, with dull red in a mottled greyish ground, many light spots; stem long and slender; cavity moderately wide, deep; basin shallow, plaited; seed brown, short, plump, obtuse; flesh greenish white, fine texture, tender, agreeable flavor; "good quality."

KROWSER. Medium size, roundish, conical, sparsely striped with carmine on a greenish yellow ground; stem $\frac{3}{4}$ inch by 1-11; cavity narrow, obtuse; basin shallow, plaited; flesh tender, of fine texture, but deficient in flavor.

LATE KEEPING PIE. Medium size, oblate, compressed, tapering to the crown; skin greenish yellow, with numerous russet dots, and a carmine cheek; stem $\frac{3}{4}$ inch by 1-16; cavity wide, acuminate, russetted; basin shallow, plaited; not in eating order.

LESHER. Large, roundish, oblong, angular; skin greenish yellow, with number of minute russet dots, and faint blush; stem short, rather thick; cavity deep, russetted; basin rather wide, deep, somewhat furrowed; not in eating order.

The Treasurer's Semi-annual statement was read, and referred to the Committee on Finance.

The Library Committee submitted their annual report, showing an interesting condition. The total number of volumes composing it being one thousand, of which fifty-five are gifts from various sources. The entire cost of purchased books is over four thousand dollars, of which sum eighty-one dollars had been received from members for fines. An appropriation of three hundred dollars was ordered for the increase of the library.

The Committee for establishing premiums reported a schedule for 1853, which, after amendment, was adopted.

The amendment to the by-laws, proposed at the last stated meeting, was taken up and discussed, and referred to a special Committee of three to report.

The President submitted a copy of a letter which he had addressed to Commodore Perry, requesting a share of the seeds, bulbs, rare plants, &c., collected by the botanist in the projected Japan Expedition, for the use of the Society.

Five gentlemen were elected members.

THOS. P. JAMES,
Recording Secretary.

Warren County Agricultural Society.

At a meeting of the Warren County Agricultural Society, held at the borough of Youngsville, on Wednesday, the 22d of December, the following were elected officers for the ensuing year:—Stephen Littlefield, President; James Younie, Treasurer; Patrick Falconer, Secretary; 44 Vice Presidents.

Pennsylvania Horticultural Society.

The stated meeting occurred Tuesday evening Jan. 18, in the Chinese Saloon, Dr. W. D. Brinckle, V. P., in the Chair. The severity of the weather precluded an extensive display, yet the commendable zeal which actuated Thomas Meehan, gardener to Mr. Cope, induced him to bring from a distance of some miles, a collection of beautiful flowering plants, much to his credit; in which were several of interest—the *Beloperone Amherstii*, new, and shown for the first time in bloom—*Raphiolepis indica*, a large plant in profuse flower, with about one dozen others. From the same source were a handsome bouquet set in a moss vase, and a large moss basket, displaying choice cut flowers; among the latter was a spike of an air plant the fragrant *Stanhopea maculata*, presenting a waxen-like appearance, and odd form. Robert Cornelius' gardener also brought a design and basket of select flowers. Benjamin Gulliss, a beautiful hand bouquet. Of fruit, Samuel Ott exhibited seven varieties of apples; Robert Cornelius' gardener, three kinds. Mrs. J. B. Smith, seven varieties of pears, some of them very fine; and Isaac B. Baxter, a dish of Passe Colmar pears. Thomas Meghran, gardener to R. Cornelius, a fine display of Vegetables.

The Committee on plants and flowers reported the following awards:—*Plants in pots*—for the best twelve to Thom Meehan, gardener to C. Cope. *Plant in a pot*—for the best specimen *Raphiolepis indica*, to the same. *Bouquet design*—for the best, to Thomas Meghran; for the second best, to Thomas Meehan; for the best hand bouquet, to Benj. Gulliss; for the best basket of cut flowers, to Thos. Meehan; and for the second best, to Thos. Meghran.

The Committee on fruits report as follows:

Pears.—For the best ten specimens, Passe Colmar, to Isaac B. Baxter; for the second best, the Buerre d'Anjou, to F. Gouin, gardener to Mrs. Smith. *Apples*.—For the best ten specimens, the Newtown Pippin, to Samuel Ott; for the next best, the same kind, to Thomas Meghran.

The Committee notice a fine collection of Fruit, preserved in jars and cans by Dr. J. H. Fromberger, of Delaware City, which they will examine hereafter, and give the result in the next ad interim report.

The Committee on vegetables awarded the premium for the best display, by a private gardener, to Thomas Meghran, gardener to R. Cornelius.

AD INTERIM REPORT.

PHILADELPHIA, Jan. 17, 1853.

To the President Pennsylvania Horticultural Society:

The Fruit Committee, in submitting their usual ad interim report, embrace the opportunity of returning their thanks to those contributors who have, at various times, so kindly and generously placed before them specimens of so many of the native fruits of Pennsylvania. Believing, as we do, from the evidence already in our possession, that our Commonwealth contains many choice varieties of fruit; that her soil and climate are naturally well adapted to its culture; and that her horticultural resources require, for their development, combined action as well as individual exertion—we hail with pleasure the efforts now being made for the organization of a State Pomological Society.

Since the stated meeting of our Society in December, the following fruits have been submitted for examination:

From Mr. Nicholas Lott, of Reading, through Mr. H. F. Boas—Specimens of the Reading pear. This variety is extensively cultivated in the vicinity of Reading, and is believed to be a native of Berks county. Size medium, pyriform, tapering to the crown; skin greenish yellow, with numerous russet dots; stem an inch long, slender; basin narrow and superficial; flesh greenish white, abounding in juice of a mild and agreeable flavor; quality at least "good."

From Mr. Charles Kessler, also fine specimens of the above pear.

From Mr. Paschal Morris, of West Chester.—An apple known to the grower, who resides in the lower part of Chester county, "only by the name of the White Spitzenberg." "The tree," Mr. Morris remarks, "is 12 or 14 years old, and has produced this season over four barrels of fruit. It is a constant bearer every year, and the fruit is always fair, and will keep till March." Size rather large, roundish oblong; skin greenish yellow, with a faint blush; stem short, rather stout, inserted in a deep, open cavity; basin moderately deep, furrowed; flesh tender pleasant, "good."

From Mr. D. Housum—More specimens of Housum's Red, which fully sustain the favorable opinion given of it in our last ad interim report. Mr. Housum informs us that the specimens were from a tree in Lebanon county; and that it is believed to be a native of Berks county; period of maturity from October to February.

From Mr. D. Housum—Specimens of a seedling apple from the premises of Mr. John Bechtold, near Stourbridge. Size medium, green-

ish becoming yellowish white, with sometimes a faint orange blush; stem $\frac{3}{4}$ an inch by $\frac{1}{4}$ in, inserted in a narrow, rather deep cavity; calyx acetum; basin shallow, irregular; the texture, "good;" in season from October to March.

From Mr. Chas. Kessler, of Reading—Specimens of the following four varieties of Apples:

1. A native apple, small, roundish, oblate, nearly covered with red, in stripes, on a whitish yellow ground; stem short, inserted in a wide, deep cavity; calyx small, closed; basin wide, moderately deep; flesh yellowish white, tender, with a spicy, saccharine flavor; quality "very good." Well adapted for the table at evening parties.

2. Another native apple, small, roundish oblong, mottled, and sparsely striped with red on a greenish yellow ground, containing many elevated russet dots. It possesses no redeeming qualities to compensate for its inferior size, and unattractive exterior.

3. A large apple, from a tree fifteen years old, worked on a quince stock; oblate, of a beautiful orange color, and exceedingly fair; stem short; calyx large, open; basin wide and moderately deep. Its attractive appearance is its chief recommendation.

4. The Keim, a native of Berks county; small, roundish, inclining to conical, of a waxen yellowish white color; stem long, slender, inserted in a wide shallow cavity; calyx small, closed, and a plaited, narrow, very superficial basin; flesh white, tender, "good."

The Committee of Finance reported upon the Treasurer's semi-annual statement, noting that they found the same correct, and alluding to the favorable condition of the investments, concluding with the recommendation of the re-election of the present Treasurer.

The Library Committee reported the names of members delinquent for fines due.

The special Committee to whom was referred the proposed amendments, submitted a report, which, on motion, lies over for consideration.

A package containing a specimen of a new kind of pea, accompanying which was a very interesting communication, giving its history, from A. H. Ernst, of the Cincinnati Horticultural Society, which was read and the peas referred to the Committee for the Distribution of Seeds, &c.

A small box of California Seeds was presented in the name of C. A. Shelton, of Sacramento City, and referred to the Committee. Adjourned.

THOS. P. JAMES, Rec. Sec.

The ANNUAL MEETING was organized by calling CALEB COPE to the Chair, and appointing CHAS. P. JAMES Secretary, and the election proceeded with, which resulted in the re-election of the following officers:

President—Gen. ROBERT PATTERSON.

Vice Presidents—James Dundas, Joshua Longstreth, E. W. Keyser, W. D. Brinckle.

Treasurer—John Thomas.

Corresponding Secretary—Thomas C. Percival.

Recording Secretary—Thomas, P. James.

Professor of Entomology—Samuel S. Haldeman, A. M.

Professor of Botany—Wm. Darlington, M. D.

Professor of Horticultural Chemistry—Robt. Harc, M. D.

Centre County Agricultural Society.

We have received from our friend, J. M. McMin, a full account of the first exhibition of this Society, which appears to have been a very spirited one, and augurs well for the future. We regret that our space will not allow us to publish the awards of premiums in extenso. We copy the following:

"This Exhibition was held on the 6th, 7th and 8th of October, on the farm of H. N. McAllister, Esq., a short distance to the east of the borough of Bellfonte. It was extremely creditable to our county, and all were gratified with the fine display of the productions of our farms and gardens. Very few articles of inferior worth were presented, and the judges acknowledged their inability to discriminate justly, in almost every department of the Exhibition."

"The whole Exhibition exceeded the most sanguine expectations of its most ardent friends, and great credit is due to the exhibitors, many of whom spared neither pains nor expense to make it respectable: especially is praise due to our very worthy citizen, H. N. McAllister, who gratuitously furnished grounds, buildings, and every facility for the exhibition, and whose large display of stock and agricultural implements contributed so largely to the interest of the exhibition."

The display appears to have embraced, besides agricultural implements, a large number of very fine horses, of high blood, and also for draught. Thorough bred and grade cattle, most of the former of Devon blood. Sheep of a cross between the Bakewell and Southdown; swine, poultry, dairy products and honey. Fruit in considerable variety and of very fine quality, consisting of apples, pears, plums, peaches, quinces and grapes. Of the latter, W. G. Waring exhibited specimens of a new native seedling, called the "jelly grape." J. M. McMinn also exhibited a new native grape, of a "peculiar spicy flavor." We should be pleased to have a few cuttings of these for testing in this region.

A good display of large specimens of vegetables was also made, and samples of wheat, corn and other grains; timothy hay, flowers, and articles of domestic manufacture; the latter quite extensive. There was also a ploughing match, and a trial of the subsoil, which "worked well."

Tredyffrin Township, Chester County Agricultural Society.

The first anniversary meeting of the Tredyffrin Agricultural Society, was held at the Society's room (Centreville), on Monday evening, the 3d instant, when the following persons were elected Officers of the Society for the ensuing year, viz:

President—Jacob Massey.
Vice President—Wm. Walker, Sen.
Recording Secretary—Joshua Jones, Jr.
Corresponding Secretary—Isaac R. Walker.
Treasurer—Charles D. Massey.
Librarian—Evans Kendall.
Auditors—Samuel Beaver, (farmer,) Jos. B. Walker, T. Ivins Walker.

The following specimens of seeds were received from Messrs. Paschall Morris & Co., West Chester.

Genesee Wheat, Italian Rye, Grass, Orchard Grass, and Herd Grass Seed, which elicited much attention and praise. A resolution was passed requesting all persons who have seeds to dispose of, to send specimens to the care of the Librarian, Centreville. If sent by the Railroad, they can be left at Mifflin Lewis's, Eagle Station, Columbia Railroad, with the prices, and other particulars attached.

A committee was appointed to purchase books and periodicals for the Library, to the amount of \$25, that being the amount in the Treasury.

Several persons became members of the Society on Monday evening, and there seems to be quite a disposition to encourage the institution.

Berks County Agricultural and Horticultural Society.

At the second annual meeting of the Berks County Agricultural and Horticultural Society, held on Tuesday, Jan-

uary 11, 1853, in the Court House, in the city of Reading, the following were elected officers for the ensuing year.

President—Dr. John P. Heister.
Vice Presidents—Henry Shubert, Henry S. Kupp.
Corresponding Secretary—Augustus F. Boas.
Recording Secretary—Reuben F. Brown.
Treasurer—Adam Leize.

WORK FOR THE MONTH.

FARM.—This may be called the last leisure month with the farmer, previous to commencing active operations out of doors. But little more can be said than to observe directions of last month. Have a full supply of wood, to last during the whole season, cut up and stored away, ready for use. Have all plows and other implements and tools examined and put in perfect order; also gears. Haul fencing materials where they are to be used. Make daily use of the card on all cows, calves, and fattening animals.

FRUIT ORCHARD.—Take off cuttings of gooseberries and currants, and bury them $\frac{2}{3}$ of their length in the earth, till wanted for planting out; also quince cuttings, grafts of apple, pear, plum, cherries, peaches, may now be taken and preserved in damp saw-dust, or earth till wanted. The two latter must be cut before any swelling of the buds has taken place. Grafting the cherry will not succeed unless performed very early. Budded peach trees which have missed may be successfully side-grafted, if the buds have not swollen. Mulch, during this month of comparative leisure, all young fruit trees. Pruning may now be attended to. Head down all apple and other trees of worthless varieties which are for grafting and forming new tops. Leave some of the lower branches for removal another season. If limbs are too large for grafting, the young shoots which will be thrown out, may be budded the following fall, or reserved for grafting the following spring. Two seasons, at least, should be occupied in changing the heads of large trees. A pole-pruning-saw, pole-chisel, and pole pruning-shears, are necessary to perform this operation thoroughly. Cut out all inside shoots and branches, which crowd the head, and are useless. Those limbs which have free access to sun and air, are the fruit-bearing and productive ones. Branches should radiate from the trunk, something after the fashion of an umbrella. When large limbs are removed, coat the surface of the wound with shellac dissolved in alcohol, to about the consistency of paint. Go round every peach tree and shorten in the last year's growth, about one-third, with the pole pruning-shears. This has been very fully proven to result in larger and finer fruit, and may be applied to other trees besides the peach. Apply the wash, before recommended, to trunk and large limbs. Grape-vines should be pruned without delay. Trim gooseberries and currants, by cutting out old wood and branches near the ground, so as to give somewhat of the tree shape.

Cut off at ground old raspberry-wood of last year's bearing, and shorten in the new growth one third. Leave only four or five stalks to each plant. Raspberries must be well manured to be productive, and moved to a new place at least once in five years. If frost should be out of ground by last of month, strawberry beds may be raked over, and a short manure dug in between rows. A good coat of ashes should be spread over the whole bed.

FLOWER GARDEN.—See directions for previous months.

VEGETABLE GARDEN.—Manures should now be composted and prepared for frames. Turn over occasionally to allow hot steam to pass off. From the middle to the last of this month, frames may be set up, and some cabbage, lettuce, radish, tomatoes, egg-plant and pepper-seed sown for early planting. The two latter require rather more heat than the others, and should have a separate frame, and never allowed to become chilled. Select a sheltered place for hot beds on the south side of a building or tight fence.

After seed is sown, constant attention is required. Cover with straw mats in nights and in cold weather, and give air occasionally on fine days.

Should it be necessary to let off steam, cover with something to keep out cold, and prevent a check to bed or plants. Radish and Beet seed, early varieties, may be sown on a rich warm border in open ground, for early use, as soon as frost is out of the ground. Cover with straw in severe weather.

By latter part of month, Extra Early Peas may be planted in rows for early crop, and also Potatoes. Rhubarb may be forced by covering plants with a barrel, and filling up with manure. Continue to give air on fine days to plants of last years sowing, in cold and foreing frames.

By last of month, if weather is open, fork in manure on asparagus beds, and give a plentiful dressing of salt.

Guenon on Milch Cows.

In answer to applications from different sections of the State, for "Guenon on milch cows," we reply it can be furnished by mail for 37½ cents, remitted postage paid in advance.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

We shall hereafter continue a monthly notice of all patents issued from the Patent Office relating to agricultural implements and machinery, for the month preceeding the issue of our paper.

RAKES TO GRAIN HARVESTERS.—By JERAM Atkins, of Chelsea, Ill.: I do not confine myself to the exact mechanical devices and arrangements described, for operating the rake, as they may be modified, or others substituted for them.

I claim the combination of the crane post, rock-shaft, and crank, to operate the jointed arm and

hands, which collect the grain in gavels, and deposit in rear of the harvester, as specified, as the machinery moves forward, when applied to machines for harvesting any grain which requires to be collected and deposited, the combination being connected by gearing with the driving wheel of the harvester, and operating through mechanical devices, substantially as described, as an automaton, to perform the above specified operations.

STRAW CUTTERS.—By WARREN Gale, of Louisville, Ky.: I claim constructing the rotating cutting cylinder, substantially as described, with a series of parallel annular grooves and ridges, and a series of cutting arms or knives, in combination with a series of fixed knives, so arranged that they enter the grooves and interlock or lap past the annular ridges on the cylinder, and thereby prevent the stalks of straw, &c., from descending between the fixed knives and cylinder, without being cut, substantially as set forth.

PLOWS.—By Wm. A. Gates, of Mount Comfort, Tenn.: I claim the rhomboidal plate, bent on one of its diagonals, and constructed and arranged substantially as described, so that either leaf can be used as a land-side or share, at pleasure, the edges of the share becoming, when the plate is reversed, the edges of the land-side, and those of the land-side, the edges of the share, in the manner and for the purposes specified.

GRAIN THRESHERS AND CLEANERS.—By J. Jones & Alex. Lyb, of Rochester, N. Y.: We claim the combination of the upright threshing and separating cylinders with the upright concave and cylindrical sieves operating in the manner set forth.

MAIZE HARVESTERS.—By J. L. Ream, of Mount Pulaski, Ill.: I claim the arrangement of the shaft of the receiving arms, with one end resting upon the cutter bar piece, thereby dispensing with an intermediate platform, so that the cut stalks will fall directly upon the receiving arms, and be thence discharged in bundles upon the ground as set forth.

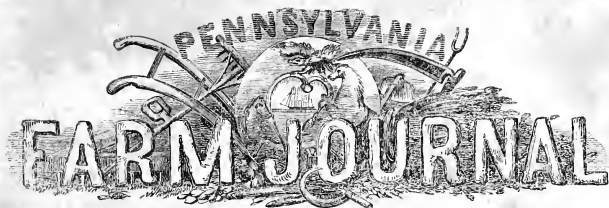
FULLING MILLS.—By Wm. E. Underwood, of Middlefield, Mass.: I claim the combination of the stop, mechanism or its equivalent, with the screw pulley and the elastic band leading to the pulley on the upper roller, whereby the whole machine is stopped, when the motion of the cloth is arrested in the manner described, and ceases to impart motion to the upper roller.

WINNOWER MACHINES.—By Samuel Canby, of Elliott's Mills, Md.: I claim the combination of the piston, rack-rod, pinion, valves and eccentric pulley, in connection with a conducting chest and blower, for the automatic graduation or government of the blast through the spouts, of a winnowing machine, arranged and operating in the manner and for the purpose set forth.

HECKLING FLAX AND HEMP.—By J. P. Arnold, of Louisville, Ky.: I do not confine myself to any particular form or arrangement of the parts, so long as the machine is so constructed that it will operate as set forth.

I claim the method of heckling hemp by subjecting it to the action of a series of mixed beaters and combs, the teeth of the latter being of varying length—some of them projecting so far, and others beyond the beaters, and the whole operating substantially as set forth.

Also, a rest, having a narrow slot open at one end in combination with a concave projecting beyond the end of the cylinder at the open end of the rest, as set forth.—*Scientific American.*



PENNSYLVANIA THE FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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Root Culture.

The cultivation of roots for stock, either as a main alternating crop, or even an important adjunct to our winter supplies, has as yet made but little progress in Pennsylvania. We hold it to be part of the *improved* system of farm management which is slowly but surely making its way to public favor, and is certain eventually, to make an important item of our farm products.

Like many other innovations on the old system, the progress of root culture has been retarded by *too much* being claimed for it. We do not believe that in the United States, for feeding and fattening stock, roots are ever going to supplant Indian corn, which has been aptly styled both meal, meadow and manure, and without doubt makes a return per acre more intrinsically valuable than any other known product of the soil.

In England, where the culture of turnips and other roots, is considered the *basis* of good husbandry, as well also as in Flanders, Germany and France, our Indian corn does not flourish to the same degree as here, and there can be no argument drawn from thence to induce the cultivation of roots here to anything approaching the same extent.

Indian corn yields, on analysis, about 90 per cent., or on a crop of 60 bushels to the acre, over 3,100 lbs. of nutritive matter, to say nothing of the value of the fodder and the cobs. Turnips, sugar-beets, carrots yield on the other hand, by analysis, 85 to 90 per cent. of water, with only 10 to 15 per cent. of nutritive matter. 'Tis only on account of the large yield per acre, that any favorable comparison can be made. An acre of land, under good cultivation, can be made to yield 30 tons of turnips or carrots, or 60,000 lbs. Ten per cent. of nutritive matter, will be 6,000 lbs. This, however, is a full crop, and to make the comparison more just, the corn should be put up to 80 or 100 bushels per acre, which will give it the precedence over the roots, considering the value of the fodder. Roots compare more favorably with wheat, oats, or barley. Thirty bushels of wheat to the acre, yields only 1800 lbs. Oats about the same weight at 60 bushels to the acre. We value root crops not as a *substitute* in feeding or fattening, for Indian corn or oats, but as an important adjunct, by which they can each be made more efficient, and we think it the interest of every farmer who has 100 acres of land, to appropriate at least one or two acres to their culture. They yield, in the first place, a very large amount of nutritive matter per acre. They are not so exhausting to the soil as grain crops, but meliorate and improve it, and by their succulent and juicy nature, afford a fair substitute for grass, promoting health and digestion, and by this indirect action, increase the value of other food, enable the farmer to winter more stock, and greatly augment the heap of the barn-yard. In England, cattle are *fattened* on turnips. There is no occasion to try this here. Where the food is so little concentrated, it must of course

take much longer than where grain is used. Neither must the value of any food be judged entirely by the degree of concentration of nutritive matter. Highly concentrated food alone, would not support life or health in animals without a certain amount of bulky materials to produce the requisite expansion.

All fattening animals should have a certain portion of roots each day through the winter, but they are particularly necessary for cows, young stock and sheep. Cows in milk may thus be kept in profit through the winter. When carrots are used, it imparts a pleasant flavor to milk and butter, and the latter has a fine yellow color, nearly equal to that from grass. Stock fed with roots, have usually fine, sleek coats, and they continue *thriving* through a period, when the farmer is often satisfied, if he can take them out to pasture in *as good condition* as they were put into the yard in the fall.

White and ruta бага turnips, sugar-beets, carrots, parsnips, potatoes, cabbages, are all used with more or less favor in different sections of the country as food for stock. We have had some experience with each of these, and raised one season 1200 bushels of sugar-beets, which we fed with great advantage. They require to be gathered before hard frosts, which affect a chemical change in the saccharine matter, on which their value much depends. The difference of opinion as to the value of the sugar-beet, is, perhaps, owing to neglect in this particular.

The ruta бага is easily raised, producing 1,000 bushels to the acre, and interferes less with the farmers time at the busy season than either beets or carrots, but they are not so nutritious. After sowing about midsummer, no attention is required till after harvest. In corn, oats, wheat, the predominating principle is starch in connection with gluten. In potatoes starch is united with albumen in about the same proportions as with gluten in wheat. Turnips have less starch and nitrogenous compounds than parsnips or carrots, and also less sugar. Beets contain about 10 per cent. of sugar, and carrots and parsnips 5 to 7 per cent.

According to Johnston, an acre of carrots, of 1000 bushels, of 60 lbs. each, contains more nutritive matter than any other crop of either roots or grain, excepting Indian corn at 100 bushels to the acre, and even this if the value of the fodder is not estimated. Carrots require more of the season to mature than either of the other crops mentioned, and greater care in management, but from the experience of some of our best cultivators, we are inclined to think, are, on the whole, to be preferred. The seed is long in vegetating, and is apt to be choked with the weeds, but this is the *fault* of the farmer, and may easily be prevented. In all root crops, but especially with carrots, let the ground be thoroughly plowed and subsoiled very early in the spring, if not done in the fall, which is better, and then harrow thoroughly at

least once a week till planting time. Every harrowing will destroy millions of weeds, by exposure to hot sun, as fast as they germinate, and we have been surprised at the effects of this, in producing clean tillage for the subsequent growth of the crop. An excellent plan, recommended by, and we believe originating with Professor Mapes, is to sow long scarlet radish in equal parts with the carrots. These come up quickly, serving to indicate the rows, admitting of early work with the cultivator, and when pulled up, either to market or for the manure heap loosen the soil around the carrot, and promote its growth. For particular directions for cultivating carrots, we refer to our last number, and the premium crops of Professor Wilkinson of Mount Airy—1017 bushels to the acre. The long orange carrot we prefer. Two to three lbs. of seed will be sufficient, and allow for thinning out. It should only be planted $\frac{1}{2}$ an inch deep. If well rubbed between the hands, it will prevent its sticking together. In all root culture, it should be remembered ploughing and subsoiling, heavy manuring with barn-yard manure or guano, the latter at the rate of 500 or 600 lbs to the acre are indispensable to success. Carrots are latterly much in demand as food for horses, and sell readily at the livery stables in our large cities, from 35 to 50 cents per bushel. The proportion of two bushels of oats, and one of carrots, keeps a horse in finer condition, and gives a better coat than 3 bushels of oats.

Directions for Planting Trees.

As the season is at hand for planting out fruit and ornamental trees, we give a few plain directions. It is a hackneyed subject, but it is of so much consequence, to be correctly done, that we may be excused for calling attention to it again at this time. There are many exceptions 'tis true, but from our own observation, it appears to be the *general* impression that the planter discharges his *whole duty* by incurring the expense of paying the nurseryman for a tree, taking it home, and covering the roots, crammed into a small hole, with earth enough to keep it in an upright position, or, perhaps, in some cases, with extra care, preventing its falling over by being secured to a stake. Other more important duties then engage his attention, and if the tree does not thrive, or gets broken down by the cattle, or if, within a short time, it does not produce some very fine fruit, equal to any in the market, the conclusion at once is come to that there must be some mistake in the variety or in the healthiness of the tree, or that fruit-growing is unprofitable.

Now, it should be recollected that a tree or shrub is an organized living structure, having organs of nutrition, circulation growth, assimilation, and that every violent injury to these, or interruption to their functions, as in transplanting, affects, *more or less* its health and vitality. The *object* in planting

is to place it under circumstances to resume these functions, with the least injury and delay, and to promote its future growth and vigor. First, in respect to preparing holes; the size of these depends on the size of the roots, but should be at least one to two feet wider than they reach, so as to admit of their extending readily in their early growth into the loose earth. They should be about two feet deep, and surface soil, leaf mould or a compost formed of two parts rich earth, with one part of barn-yard manure prepared some months beforehand, be filled in around the roots and small fibres, the poorest earth being placed on the surface. Some planters make holes 5 to 6 feet in diameter. The larger the hole and quantity of rich, loose earth, the more rapid will be the growth, and earlier the profit.

Avoid especially deep planting, one of the most common errors, and most fatal. After the earth is settled, the tree should stand about the same depth as before. Pulverize the earth well, and when the hole is $\frac{3}{4}$ full, a bucket of water poured in settles it well and thoroughly about the fibres, leaving no hollows which often cause decay, but bringing it in contact with every part. Avoid the too common practice of settling the earth among the roots, by shaking the tree up and down, which brings them into a vertical and unnatural position. When the remainder of the hole is filling up, press the foot around the tree, to establish it firmly, and secure with a stake, to prevent being disturbed by the winds. Any roots which may have been injured in taking up, should be carefully cut off at the end, with a sharp knife, from the under side. If there has been much mutilation, the top and branches should be shortened in, to restore the balance of the system, or the evaporation from the leaves may be greater than the roots can supply. After planting, mulch the ground with short litter, of any kind, leaves, tan, &c., which keeps the ground damp, and is greatly preferable to frequent surface watering, which bakes the soil, and prevents the fertilizing influence of the atmosphere.

As soon as convenient after the tree is planted, apply with a white-wash brush, soft-soap and lye in equal parts, to the body and limbs. The check to growth consequent upon transplanting, affects the bark unfavorably, making it dry and hard, and of sluggish circulation. If more convenient, the proportion of a pound of potash, dissolved in a gallon of water, will answer the same purpose. It brightens and cleans the bark, and we have found it very useful.

In addition to mulching, cherry trees, particularly of large size, should have, the first summer, rye straw tied up their trunks, to avoid the effect of the hot sun. They generally branch higher up than other trees, exposing more of the trunk, and we think can often be saved by this method. There are more

frequent failures in transplanting cherry than other fruit trees.

Trees should not be planted for orchard culture in ground laid down to grass, but should be kept under cultivation for a few years, at least. A crop of corn will be no injury the first season, if the exhaustion of the soil is made up, and afterwards, potatoes or other hoed crops should only be admitted. Clover may be sown, and remain for a couple of years, and then be plowed down, as an alternation, with potatoes or other roots. When this is done, care must be taken to leave no rubbish as harbor for mice. As regards varieties of fruit, we refer to list in former number, of American Pomological Society, merely premising that we have fears that some of the fine eastern fruits are not to prove so desirable in Pennsylvania, and that it will be safer to plant *extensively* only of such kinds as have been well and fully proven to be adapted to our soil and climate. We would by no means discard all that have not been proven here, but plant moderately of them.

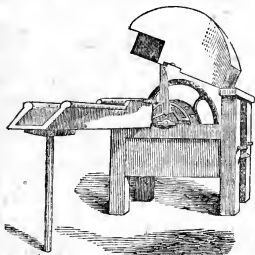
Wash for Fruit Trees.

Some years ago, we were called on by a man named Peter, and hailing from New Jersey. He had pruning materials with him, and offered to perform that operation, and also to put unhealthy and unproductive trees into speedy bearing condition. We gave him employment for a few days among our trees, and after pruning was all performed, with some interest, went around with him to find out his application to promote fruitfulness, and which he called his panacea.

We took him to the first tree old enough to bear, telling him, "Peter, this tree seems big enough to have fruit, has been standing in good soil for several years, what had better be done." Peter would walk round and round the tree, very quietly examine every part of it, and pausing for a minute or two, as in deep thought, would break forth thus:—"Well now Mr. ———, *in my opinion, the best thing for this tree, is to get some soft soap and lye, mix them half and half, take a white wash brush and rub with this mixture up and down to trunk and branches.*" This seemed very reasonable, and we would pass on to the next, remarking, "Peter, here is a tree differently affected from the other, *that* had been making very little growth, but this appears to have grown rapidly, still there is no fruit; what had better be done with *this* subject?" Peter would appear puzzled, would reflect a little longer than before, passing around and around the tree, scrutinizing every part very closely, and then break forth again, "well now, Mr. ———, *in my opinion, (laying considerable emphasis) the best thing for this tree, is to get some soft soap and lye, mix them half and half, take a white wash brush and rub with this mixture up and down to trunk and branches.*"

We would then pass on to a third subject, a plum tree having the excrescences on the branches, remarking, "here is entirely a different disease from either of the others, what can be done here." Peter would walk round and round as before, eyeing the tree most carefully, and deliberately, as if working out some abstruse question in metaphysics, and after considerable pause, like a physician in a critical case, would remark, "well now Mr. —, in my opinion, the best thing for *this tree* (emphasizing the word as if a new receipt was coming) is to get some soft soap and lye, mix them *half and half*, take a white wash brush and rub with this mixture *up and down*."

Much amused, we took him to a Sugar Maple, healthy and vigorous; but with two or three limbs broken and the bark somewhat scaled by another tree falling on it. "Peter, what had better be done here?" He seemed somewhat confounded, examined the tree as before, paused awhile as if in profound thought, and with the greatest gravity remarked—"well now Mr. —, in my opinion, the best thing for *this tree*, is to get some soft soap and lye, mix them half and half, take a white wash brush and rub with the mixture up and down." It was useless to go farther. Peter was evidently a man of one idea. We followed his advice, however, and found so much benefit from the application to all our fruit trees, that we have recommended it with confidence ever since. Peter scraped the bark off an old Queen apple tree, and applied his mixture pretty copiously, and the next season we had a greatly increased crop of fine fruit. It is a mixture convenient to most farmers.



Potts' Patent Corn Stalk Cutter and Crusher.

The above is a cut of an excellent machine for this purpose, which is now being considerably used in this neighborhood, and works very satisfactorily. Our position makes us feel some hesitation about a strong recommendation of new implements, but this cutter and crusher has been well tested in West Chester and vicinity. Enos Smedley, an account of whose experiments with cut fodder we gave in last number, says, "he has cut with it two bushels of fodder in one

minute, and thinks it would work at that rate all day." He has also cut with it a dozen large sheaves of oats in one minute. It is constructed on the principle of the spike grain thresher.

It can be obtained at the Agricultural Warehouse, in West Chester, and forwarded to any part of the country. Price, \$28.

Italian Rye Grass.

Can any of our readers give us their experience with this grass, the "*Lolium Perenne*" of Botanists? Some of our Chester county farmers have used it on a limited scale, and speak of it in the highest terms, as being of rapid growth, and preferred by stock, even to our natural green grass, "*Poa Pratensis*." It is called *Perennial* Rye Grass, from its habit of continued growth through the season, and has been found here to keep green longer than any other variety. The stock keep it eaten down very close. It is supposed by some to be preferable to timothy, for mixing with clover, and will bear frequent cutting. Knowing that it had been considerably grown in the State of Delaware, we addressed a letter of inquiry to Barney Reybold, from which we extract the following,

In answer to your enquiries I would say, that my experience in its use, has been, that Cattle, Sheep or Horses prefer it either for pasture or hay, to timothy; for pasture it will afford more feed, than any other kind of grass, in fact, it requires to be fed close to keep it from getting rank and going to seed. The quantity to be sown per acre is one peck if sown with Clover, and two pecks if sown alone; I sow it either in the fall or spring; I think it takes the best in the fall, but it does well in the spring, the same time you sow Clover. It ripens for mowing one or two days earlier than Red Clover; it is therefore better to be sown with Clover than Timothy. Its fattening qualities are equal to the best natural green grass.

In the English works we have examined, it would appear to be annual or perennial according to good or bad soil, being in the latter only annual. It is recommended by some, and considerably used for lawns, where a compact sod is desired.

We should be pleased to hear more about it from some other correspondents.

A hog of the Chester county breed, raised and fed by William Ingraham, of West Chester, was recently slaughtered, whose weight was 416 lbs. Nine months old.

The aggregate wealth of the United States amounts to \$12,000,000,000, and the population to 24,000,000 of souls. The wealth divided by the population gives \$500 to each person, young and old; and counting five persons to each family, it would give the handsome little fortune of \$2,000.

ENGLISH GAME, brought by the steamers, is quite common in New York market. English pheasants sell at five dollars a pair, and hares at two dollars and fifty cents each.

Japan Pea.

We introduce the following interesting correspondence from a Boston paper, relating to the "Japan Pea," which is now exciting some attention as a new article of farm crops. *The whole plant with the seed,* is recommended as excellent for fattening hogs and cattle.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The accompanying letter from Mr. Ernst, was read at the last meeting of the Society, and being deemed of sufficient importance to the Agricultural community, it was ordered to be published.

SPRING GARDEN, Cincinnati, Ohio, Jan. 11th, 1853.

My Dear Sir: I herewith send you for distribution amongst the members of the M. H. Society, a small parcel of peas.

The growth of the plant is peculiar, being of an upright and stiff form, somewhat branching; the leaves are large, light-green and downy beneath; the blossom is small, and of lilac-color; seed-pods numerous, small and woolly; growing in clusters over the entire plant, proving very productive.

Its habit of growth is such as to fit it to withstand severe storms; and, should it prove valuable as food for cattle, it must commend itself to the agricultural community in field culture.

In its cultivation it evidently requires room, to enable the plant a full development for branching. Its bearing properties are immense.

Accompanying the seeds, I send a plant, to show its habits of growth and bearing properties.

Its origin is said to have been Japan. It was introduced into this country some two years since by the agency of one of those calamities which sometimes result in benefit to mankind.

An American ship encountered a Japan vessel in distress, and the crew were carried to San Francisco, California. Amongst the stores which were transferred was the "Japan pea," a few of which found their way into the hands of Dr. Edwards, of Alton, Ill. He handed them over to Mr. J. H. Ladd, a distinguished horticulturist, who presented the produce to our society. Those now sent you were grown in my grounds; having fully matured in our climate. Your climate may prove too severe.

I have sent small packages of seed to kindred associations, with the request that they be placed in careful hands.

It is possible that it may not be any thing new with you. I would be thankful for any information you may possess in reference to it.

Very respectfully, A. H. ERNST.

The plants and seeds were submitted to the inspection of the Society's distinguished botanist and vegetable physiologist, J. E. Teschemacher, Esq., and in return, received the following note:

My Dear Sir: The plant alluded to by Mr. Ernst, is *Cajanus bicolor*, a native of East Indies, Amboyna, Japan, &c.; flower small, interior yellow, vexillum purple, erect shrub, pubescent, nearest in alliance to *Lupinus*. The seeds are good to eat, and, when young, very delicate. On soaking the round seeds for an hour in moderately hot water, they take exactly the form and appearance of the common white bean, become quite tender, and have a pure and delicious nutty and oily flavor. *The whole plant, with the seed, is excellent for fattening hogs and cattle.*

There is one other species, *Cajanus flavus*, common in South America and the West Indies, where it is sometimes used for a fence to sugar plantations. In Jamaica, this species is much used for feeding

pigeons, and is there called the pigeon-pea. In Martinique the seed is much esteemed for the table.

Being a tropical plant, it would hardly stand our winters. Yet, from the observations of Mr. Ernst, it is not improbable that our climate might admit of an annual harvest of the seed, which seems to be so abundantly produced as to make an experiment highly interesting.

Most truly yours, J. E. TESCHEMACHER.

Boston, 19th Jan., 1853.

P. S. These particulars I furnished to Hon. N. P. Wilder a week ago, imagining they would be laid before the society.

To Dr. EEN WHITE, Cor. Sec. Mass. Hort. Soc.

JAPANESE GARDENS.—The gardeners of Japan display the most astonishing art. The plum tree, which is a great favorite, is so trained and cultivated that the blossoms are as big as those of dahlias. Their great triumph, however, is to bring both plants and trees into the compass of the little garden attached to the houses in the cities. With this view; they have gradually succeeded in dwarfing the fig, plum and cherry trees, and the vine, to a size so diminutive as scarcely to be credited by an European; and yet these dwarf trees are covered with blossoms and leaves. Some of the gardens resemble pictures in which nature is beautifully modelled in miniature—but it is living nature! Maylon, whose work on Japan was published at Amsterdam, in 1830, states that in 1828 the Dutch agent of commerce at Nagasaki, was offered "a snuff box, one inch in thickness, and three inches high, in which grew a fig tree, a bamboo, and a plum tree in full bloom."—[Exchange.

HOW TO JUDGE CATTLE.—In all domestic animals, the skin or hide forms one of the best means by which to estimate their fattening properties. In the handle of oxen, if the hide be found soft and silky, it affords a proof of tendency to take meat. A beast having a perfect touch will have a thick, loose skin, floating, as it were, on a layer of soft fat, yielding to the slightest pressure, and springing back towards the finger like a piece of soft leather. Such a skin will be usually covered with an abundance of soft, glossy hair, feeling like a bed of moss, and hence it is ever termed a mossy skin. But a thick-set, hard, short hair always handles hard, and indicates a hard feeder.—N. Y. Farmer.

There is a deal of valuable information embraced in the above short article. The *handling of animals*—we always considered a most important point, in selecting a good feeder, and it is entirely too much neglected. Nothing but practice will make one understand the difference in this particular. We have heard capital judges say, they would prefer to buy with their eyes shut, if they were allowed to handle an animal, rather than to judge by appearance only, without handling.

BREAKING STEERS.—Never use force. When you wish to put the yoke on for the first time, coat them with an ear of corn or a little salt. After they are yoked don't use the whip, but induce them to follow you for the corn or other feed you offer them. In that way you will save yourself much trouble, and your faithful servants much fear.—*Agricultor*.

Extract

FROM PLAYFAIR'S LECTURE ON THE FEEDING OF CATTLE.

Most farmers are aware of the fact that young calves, sheep and pigs, fatten more quickly in the dark than in the light. The explanation of the fact is simply this, that they pass more of their time in sleep. Sleep is that portion of life of an animal when the principal growth of its body takes place. In sleep all the voluntary motions cease; vitality, therefore, now increases the mass of the body, as its force is not expended in producing motion. It is for this reason that we like those lethargic pigs which stagger to the trough in a lazy way and sleep, as they have finished eating. Very little matter being expended in motion, they rapidly increase in size. The phlegmatic Chinese or Neapolitan pig fattens quickly, whilst the unimproved, long-legged Irish pig, which gallops about at such an extraordinary rate, expends all its food in the production of force, and does not grow rapidly.

Perhaps the greatest refinement in fattening is exhibited in the manner of feeding ortolans. The ortolan is a small bird esteemed a great delicacy by Italians. It is the fat of the bird which is so delicious; but it has a peculiar habit of feeding, which is opposed to its rapid fattening—this is, that it feeds only at the rising of the sun. Yet this peculiarity has not proved an insurmountable obstacle to the Italian gourmands. The ortolans are placed in a warm chamber, perfectly dark, with only one aperture in the wall. Their food is scattered over the floor of the chamber. At a certain hour in the morning the keeper of the birds places a lantern in the orifice of the wall; the dim light thrown by the lantern on the floor of the apartment induces the ortolans to believe that the sun is about to rise, and they greedily consume the food upon the floor. More food is scattered over it, and the lantern is withdrawn. The ortolans rather surprised at the shortness of the day, think it their duty to fall asleep, as night has spread its sable mantle around them. During sleep, little of the food being expended in the production of force, most of it goes to the formation of muscle and fat. After they have been allowed to repose for one or two hours in order to complete the digestion of food taken, their keeper again exhibits the lantern through the aperture. The rising sun a second time illuminates the apartment, and the birds, awaking from their slumber, apply themselves voraciously to the food on the floor; after having discussed which they are again enveloped in darkness. Thus the sun is made to shed its rays into the chamber four or five times every day, and as many nights follow its transitory beams. The ortolans, thus treated, become like balls in a few days. The process speaks much for the ingenuity of its inventor, if it does not for the intellect of the ortolan. In this refined mode of feeding, every condition for the fattening of an animal is united—i. e., warmth, plenty of food, and want of exercise.—[New England Cultivator.

Ice House Management.

This is a matter of no small importance, yet how often do we see it treated, not only with indifference but upon the very worst principle possible to ensure its preservation; not one ice house in fifty is constructed upon the correct principles—not one in the same number is managed correctly. When we consider that damp and heat are the two great agents of thawing, it should be our endeavor to counteract these by every means in our power. To effect this, ventilation must be had resource to, and non-conducting mate-

rials employed in the erection. Of materials, we may observe that stone is of all others the worst; timber and brick are the best. The usual practice of sinking ice houses to a great depth under the surface is bad; indeed, it has only one redeeming property, which is the convenience of filling from the top. Its disadvantages are, the difficulty of admitting sufficient ventilation to correct the dampness, which, build them as we may, is sure to exist in under-ground houses, the conduction of heat from the surrounding soil, and the difficulty of effecting sufficient drainage; these very far over-balance the advantages thus offered. Why are the majority of ice houses and most cellars during winter so much warmer than the surrounding atmosphere? Is it not from the heat conducted through their walls from the surrounding soil? Earth is a much better conductor of heat than air, or, in other words, it communicates its heat to other bodies coming in contact with it much quicker than that element. Hence the necessity of placing between the earth and the ice some slower conductor of heat, and the slowest conductors we have applicable to the case are timber, charcoal or air; both also resist damp, while stone does not, and, besides, it is a rapid conductor of heat. Water is also a rapid conductor of heat, and instances have been known, where rain water has percolated the roof of an ice house, that the temperature has been raised to sixty degrees. Hence the necessity of keeping such houses perfectly dry, not only at the top, but also throughout, by efficient drainage of the melted ice and by ventilation to correct the dampness in the atmosphere and walls. Indeed, the walls of an ice house, to be in proper condition, should be as dry as those of a dwelling.

The cheapest and best way of constructing an ice house, is to make its walls double with a space between them, which should be filled with that excellent non-conductor, "charcoal dust." Where timber is the cheapest the house should be boarded inside and out, with the charcoal dust between the walls; where bricks are cheapest they should be used. Stone may be safely used with such a good non-conductor between a double wall. Dry saw-dust is also a good non-conductor, and it can easily be obtained everywhere in our country, but it should not be used unless it is perfectly dry.—[Scientific American.

WOOL IN THE UNITED STATES.—The Economist says—"By recent scientific researches on the part of Peter A. Browne, Esq., of Pennsylvania, it has been established that the United States can outrival the world in wool as in cotton. Thus, Spanish sheep, yielding naturally wool 2000 to the inch, carried to England, degenerated to 1900 to the inch, and brought to the United States, recovered to 2,100, or finer than the original. The fact being once established, that our climate and soil produce finer wool than other countries, will give to our manufacturers inevitably the superiority in cloths, if the manufacturer is allied in his interest to the grower.

PACKING APPLES.—The following method is practiced in some parts of Maine for packing apples for shipment to California: Each apple is wrapped in paper, and then packed in the barrel in layers. Between every two layers of apples, is a layer of powdered charcoal. The apples are thus prevented from coming in contact with each other, and through the anti-putrescent qualities of the charcoal, the rot, even should it attack a part of the fruit, will be prevented from communicating to the remainder.

The True System of Farming.

Trying to do too much, is a common error into which the farmer often falls. His great eagerness in striving to be rich, is doubtless the cause of his error. He is ambitious and energetic, and forms his plans on a large scale, too often, perhaps, without counting the cost. He buys a large farm, and wants to be called a "large farmer," without understanding or considering the true elements that constitute a real farmer. He fancies the greatness of that profession, as is too often the common estimate, to be in proportion to the number of acres, not to say cultivated, but embraced within the boundaries of his domain. The fact is now being spread abroad, that a large farm does not make a man either rich, contented or happy, but on the contrary, the reverse of all these, unless well tilled, when his labor is rewarded by ample crops and fair success in the various departments in which he is engaged. No farmer can realize the full benefits of his profession without adopting a thorough system of culture. His success, commensurate to his wishes, always depends upon the manner in which he prepares his grounds, plants his seed, and rears his stock. Neither of these departments, which may be considered the cardinal ones of his profession, will take care of themselves. The soil may be rich, but it needs culture. His seed may be sown, but it should be in due time, and always on soil well prepared and of a suitable quality for the production of the crop desired. His stock must be constantly cared for—for it derives its thrift from the soil, and sends again to that soil the sustenance it requires; but this is not done in a loose, hap-hazard way. The farmer's care is required, and all his better judgment must be exercised in keeping up this system of reciprocal benefits that may be realized by every intelligent and industrious farmer.

Thorough cultivation and systematic attention to all parts of his business is indispensable to a good degree of success. The very corner stone to this whole system of farming, is to do what you do thoroughly; nature will not be cheated, and never gives full returns to the half-way work that is practiced by vastly too many calling themselves farmers. If the land has been worn, the extent of that exhaustion and the food required, must be first considered. When ascertained, the full measure of these requirements must be given, to bring out full returns. If the farmer has but a small stock, and consequently but a small amount of manure to replenish his land, it is obvious that but a small farm can be supplied with it; and good judgment at once dictates that to cultivate properly a large farm, artificial fertilizers must be used if good crops are obtained. And so with the labor, two men cannot suitably till one hundred acres of land, when the labor of two men and perhaps four, might be profitably employed on seventy-five acres.

This is the great error in farming. Two men strive to do what four can hardly do, and thus thousands of acres are run over, half tilled, and producing half crops. The land is run over till worn out, sustaining year after year the unnatural tax, till its energies are entirely exhausted, and it fails to yield even a feeble crop, because its life is worn out. Much of the soil in Virginia and other Southern States is a type of this. Thousands of acres are lying entirely useless and exhausted, and will ever remain so, till the first elements of its power are returned to it. This process is fast going on in many of the Western States. The soil is treated like an inexhaustible mine; the tillers crying give, give, give! till in a few years it will have nothing to give. The boast of the

West is, large farms and large fields of grain; plow, sow, and reap, is the business of western farmers, drawing out the very life of the soil, and sending away in the heavy exports that are constantly going onward, without returning to the soil the food it requires to make it productive.

The light that is being spread abroad on this subject, is beginning to correct this practice to some extent, but in most instances very little is returned to the soil to keep it alive, till after several years of continual cropping, it manifests signs of exhaustion, and ultimate barrenness. When tillers of the soil understand their true interests, they will cultivate no more land than they can do well. Fifty acres of land for tillage, brought to a high state of cultivation, pays better than one hundred run over in the way that many do.—[Jefferson Farmer.

New Subsoil Companion Plow.

The Oxford (Eng.) *Journal*, in speaking of the Stow-on-the-wold and Chipping Norton Agricultural Society, says: "As soon as the plowing was over, the company congregated to witness the trial of a subsoil companion plow, manufactured and patented by Mr. GILLET, of Brails. This plow is so constructed that it combines all the features of an ordinary plow with the addition of a subsoil plow, which may be used at the same time, or detached or suspended if necessary. The combination of these advantages naturally excited considerable interest, as to whether the implement could fulfil what was expected and said of it, and its trial was looked to with great anxiety. The land selected for the trial was by no means adapted for it, because it was light and rocky; and, therefore, the plow could not sufficiently develop its powers, and this was admitted on all hands; but the inventor felt satisfied that even under such disadvantages it would give a tolerable idea of its value and importance. In that conviction he was fully borne out by the trial, for the work was well executed, and the subsoil plow taking the lower furrow and following in the horses' track, showed at once its perfect applicability, especially for stiff, heavy land, where the horses tread renders the ground so hard as to prevent the possibility of the water getting away. For all root crops this implement appears to be admirably adapted, and in plowing for Beans, or after Turnips, the manure can be most advantageously plowed in, so as to leave it near the surface, which every one is aware is a most desirable object. The general opinion of all who examined this plow, and witnessed even this trial, was, that it is one of the most valuable implements that has yet been brought before the notice of the public, for it not only possesses the advantages of plowing and subsoiling at the same time, and with one operation, but the cost of this combined power is but a trifle beyond the ordinary plow, and the subsoil can be attached to any plow, while the draught is but slightly increased by it. The cost of the plow complete does not exceed six guineas, and the subsoil alone, to be attached to any other plow, two guineas; so that the expense is not likely to interfere with the demand for an implement which must come into general use as soon as parties become acquainted with its merits. We understand that the patentee has already received numerous orders; and of all the improvements which have been devised for the preparation of the land to receive seed, there is not one which is so calculated to effect its purpose in a more successful manner, and there is no implement of the possession of which a farmer may be prouder. It is not anticipating too much to say, that within a twelve

month there will be scarcely an occupier of stiff, heavy, clay soil, who will not have this implement in operation; for all those who have used it (and it has been at work a short time already) concur in saying that it does most effectually fulfil all that it professes. Great credit is due to the parties who have brought their skill and judgement to bear upon an implement which many were inclined to think admitted of no improvement, but the reverse of which has been developed in so eminent a degree, that we doubt not the inventor will for many and many a year be regarded as one who has conferred a benefit on society to an extent that, perhaps, he little anticipated.

A Perfect Short-Horn.

We find in the Wool Grower and Stock Register for November, the following description of a perfect Short-Horn—"furnished by a gentleman well qualified to speak on the subject." It is condensed by the editor as follows:

The head is the most important part of the whole animal—not on account of its real value, but as forming a sort of INDEX to other good or bad points. A good head never yet went with a bad animal, nor an inferior head with a superior animal. The head should be small, the muzzle fine, and the nose of a rich orange color. A flesh colored nose, or a very light brown, is admissible, but it should never be black. The eyes should be prominent, full of intelligence, yet evince mildness and good temper. They should be encircled with an orange-colored rim. The ears should be small and thin, and orange-colored within. The horns fine, short and waxy, a little flat next the head, and slightly curved upward. The neck should be fine next the head, and in the cow no dewlap. In the bull a very small dewlap evinces a good constitution—but it should be small and not run down the neck, as this would give the animal a very coarse appearance. The shoulders should be snug, the crops full, the back straight, broad and level, and the ribs round and well spread out. Nothing appears more inferior than a Short-Horn with a sharp back and flat rib; such an animal can carry but little flesh, and that of an inferior quality. The rumps should be long, broad, and level from the hips back, reaching well down the thigh, yet not far enough to produce coarseness. The tail should be well set, nearly on a level with the back, large where it joins the rumps, but diminishing to great fineness at the brush. The hind legs should stand square, rather wide apart—straight when viewed from behind—the bone small and fine, and the feet light. The fore-legs wide apart, short; small below the knee, large above and increase to great width at the elbow. The brisket, full, prominent wide and deep—reaching well back between the fore-legs, which gives the animal great depth at the girth, and shows also, with width of chest, a strong constitution. There should be great width (especially in the bull,) when viewed in front; his head well set up, joined to an arched and majestic neck.

The skin should be soft and pliable, of medium thickness, covered with a soft, fuzzy coat, which, when parted, shall exhibit a yellow skin. The udder when fully developed in the cow, should be square, reaching well forward and up behind, the teats wide apart and pointing slightly outward—the udder being well covered with long, soft, silky hair. The colors of the Short-Horns are red and white—and these colors intermixed, forming red and white, and the beautiful, fashionable roan.

The pedigree should be good, and trace to animals recorded in either the American or British Herd Book, on both the side of the sire and the dam. Persons procuring Short-Horns ought to always require a written pedigree, certified to by the breeder; and they should never purchase an animal as thorough-bred, without a compliance with this requirement.

A New Reaper.

No improvement in the conduct of Agricultural labor, has attracted so much attention of late years, as the various machines for reaping grain; and yet it is acknowledged on all hands, that all of them are more or less defective, and that there is still "a more excellent way." We are rather disposed to think that that "more excellent way" has been discovered by one of our own citizens, and that the very best reaping machine which has yet been brought to the notice of the public, has been invented by one of the very numerous family of Smiths, commonly called John H. Smith, of Brooklyn, N. Y. (office, 27 Nassau street, N. Y.) It is far simpler than any of the reapers yet presented to the public and less expensive.

The machine is based on a principle quite different from any of the others. Four revolving cradles, similar to the old-fashioned cradle of the farmer, with fingers, are carried around in a sort of drum, and cut about a foot at each stroke. They carry the grain carefully to the inside of the drum and stand it up in the form of a sheaf, whence it is taken by a man on the machine and bound as the machine passes along. There is very little machinery about the instrument, and the work is done with a certainty, neatness and ease, which exhibits the genius of the contriver. We should say that it would also work with great rapidity, and is so light as to be used with only a single horse. Of course we form our opinion of what the machine can do by the model, only, as it has not as yet been brought into practical use. Workmen are, however, engaged in manufacturing the reaper, and it will soon be an exhibition, at Allen's Agricultural Room, in New York.—[Exchange.

A NEW ARTICLE OF EXPORT.—On Thursday last, Burton Kingsbury, Esq., of Bradford, Pa., shipped seventy-three bushels of acorns for Belgium and Holland. Mr. K. is agent for a gentleman of great wealth, owning land in this country, who ordered these acorns for the purpose of introducing the oak in those countries.

HEAVY LOSS.—Large quantities of hogs, slaughtered in Columbus and Cleveland, Ohio, and shipped to New York by railroad, have entirely spoiled by warm weather. Twenty-eight car loads in one train became so putrid that the stench was an intolerable nuisance to the villages they had to pass through.—*Cin. Gaz.*

NEXT AGRICULTURAL FAIR.—At a meeting of the Executive Committee of the Pennsylvania State Agricultural Society, held at Harrisburg, last Friday, Tuesday, Wednesday, Thursday and Friday, the 27th, 28th, 29th and 30th of September next, were fixed upon for holding the next State Fair; and a Committee, of which Judge Watts, of Carlisle, is Chairman, was appointed to receive propositions from the citizens of towns or cities desiring to have the Exhibition in their vicinity.

State Agricultural Society.

The following is the Treasurer's account submitted at the annual meeting in January, which shows the expense of the Lancaster Exhibition.

DR.

George H. Bucher, Treasurer Pennsylvania State Agricultural Society.

1852.

Jan. 7—To balance in treasury, as per settlement on 20th,	\$578 54
" Admission fees for members,	24 00
Feb'y— " " " "	10 00
March— " " " "	1 00
" 22—Cash of R. J. Ross, on account of subscriptions of citizens of Harrisburg, towards expenses of State Fair,	516 25
" 30—To State appropriation for 1851	2,000 00
April—Members fees,	4 00
" 28—John P. Rutherford, Swatara subscription towards expenses of fair at Harrisburg,	70 00
August—Members fees,	7 00
" 20—Subscriptions of A. O. Heister to State fair at Harrisburg,	5 00
Sept'er—Members fees,	38 00
" 28—Cash of Wells Coverly, account of Harrisburg subscription,	57 50
" —Cash of W. T. Sanders, account of Harrisburg subscriptions,	20 00
Oct'er—Membership fees and diplomas,	92 50
" —Amount of fees received from members and admission tickets during the fair at Lancaster, 20th, 21st, and 22nd.	8,385 51
" 22—Life membership certificate, James Gowen,	10 00
" —Life membership certificate, Peleg B. Savery,	10 00
" —Life membership certificate, C. B. Rogers,	10 00
" —Life membership certificate, S. C. Stambaugh,	10 00
Nov. 13—Amount of A. O. Heister, as per statement furnished,	16 11
" —Subscription of J. C. Bucher, to Harrisburg fair, by R. F. Kelker,	10 00
Dec'br—Membership fee,	1 00
" 10—Premiums returned by Abner Thompson,	10 00
1853.	
Jan'y—State appropriation for 1852,	2,000 00
" —Membership fees from R. C. Walker, during year,	22 00
" 6—Premium returned by Bolden & Price,	5 00
" —Subscription of Lancaster connected with fair,	1,500 00
	<hr/> \$15,413 41

CR.

By payments as per Vouchers furnished, and approved of by the Executive Committee, viz :

By rent of office and incidentals,	\$85 00
" Furniture for office,	64 81

By Stationary,	33 17
" Seal and Press for office,	17 50
" Postages and Telegraphic despatches,	60 51
" Tents used at Lancaster fair,	260 00
" grain, hay and straw bought for fair,	\$298 49
Deduct grain sold,	135 02
	<hr/> 163 47
" Lumber purchased for fair ground,	\$1,790 81½
Deduct amount sold,	1,410 81½
	<hr/> 380 00
" Rent of ploughing and fair ground,	143 25
" Hauling, &c.,	370 97
" Labor and sundry expenses preparatory to and during fair at Lancaster,	590 33
" Police during fair,	450 23
" Superintendents on fair grounds,	87 00
" Printing,	696 19
" Freight and sidings,	198 89
" Expenses of business offices during the fair,	396 15
" Expenses incurred by Secretary,	600 00
" Hardware, Nails, &c.,	154 18
	<hr/> \$4,751 67
" Amount of premiums awarded at Lancaster,	1,650 00
" Invested by order of Executive Committee,	5,000 00
" Deposited in Dauphin Deposit Bank by order Executive Committee,	2,000 00
" Balance in Treasury,	2,011 74
	<hr/> \$15,413 41

Original Communications.

Large crops of Corn raised in Chester county, Pa.

The following account of some extraordinary crops of corn raised by our friends, the Messrs. Dickey, of this county, will be read with interest. There are two or three points worthy of especial notice. 1st, that it was drilled in, in rows 3½ feet apart, that the land was ploughed *deep*, and by the repeated harrowing and cultivation, the weeds were destroyed *previous* to planting. This plan of lessening labor by frequent harrowings, previous to the crop being put in the ground, we have adverted to in our article on root culture in the present No., and often at other times. We have heard of several other crops of corn the present season in this county, varying from 80 to near 100 bushels to the acre.

It seems to take Chester county farmers to raise corn. The late premium crop of George Walker, of Susquehanna county, of 160 bushels to the acre, when reported here, excited some surprise, till it was ascertained that he was one of our own Chester county farmers, born here, and had moved to that county, carrying with him his agricultural skill and knowledge how to raise big crops.

For the Farm Journal.

MESSRS. EDITORS:

"Toby," a correspondent of the *Village Record* noticed in that paper, a few weeks since, a crop of corn raised by S. J. Dickey & Bros., the past season. We have since received your request to make out for the "Farm Journal" a full statement and method of operation. We take pleasure in complying. We believe the science of farming, although it is now receiving more nearly than ever before, the attention its importance merits, and is now advancing with rapid strides, fostered as it is by such enlightened suggestions and discoveries as appear in such invaluable periodicals as the "Farm Journal;" yet there is still much to be learned and discovered.

If one of your correspondents can say any thing that will enable some or one of your readers to raise one bushel more of corn to the acre, he has done a public good. We have been successful in raising some large crops, and give our experience to your readers for what it is worth.

No. 1 is a small field containing two acres and sixty-four perches. It was in pretty good condition, and had been in grass for some five or six years. It had been limed twice before, and was limed last spring after the ground was plowed; it received, also, sixteen cart-loads of barn-yard manure to the acre, which was spread on the sod and plowed under; and we may say here, that in seeding corn, we consider the *plowing* a very important part of the matter. Any person who has observed the enormous mass of roots thrown out by a heavy crop of corn, cannot fail to believe it impossible that they should be all accommodated to advantage in four or five inches of soil. It is our custom to plow from nine to eleven inches deep for corn, and as that cannot be done in a stiff sod with one pair of mules—which is the motive power we use—we always use four, or else a pair of mules, and a yoke of oxen together. To this many will object on account of the increased expense; but we are satisfied that it pays us well in the end. It was a source of considerable difficulty with us for a long time, our not being able to procure a plow that would turn over a furrow slice ten or twelve inches in thickness, to our satisfaction. None of our common plows will do it. We procured some short time ago, however, the "Michigan double plow," which promises to answer our purpose more nearly, although we have not had it long enough to get a fair trial of its merits. This we will do the coming spring, and if it answers as well as we expect, we will give our experience respecting it, hereafter.

But to come back to the corn. After the ground was plowed, a very heavy roller was put on it, and the field rolled. It was then harrowed twice across he furrows, with a sharp spike barrow. We then

put on a large cultivator, over five feet wide, with nine teeth in it; this goes over the ground three times, or oftener, if the soil seems to require it, and then we finish with a light roller. It is better, and less expensive to work the ground before the corn is planted and up, than after; therefore, we do not spare the harrow, but keep at it until the ground is completely pulverized. After corn is planted, it is some three weeks before it is up high enough to work, when, if the soil has not been well prepared beforehand, the grass and weeds get such a start that it is next to impossible to keep them in subjection in after culture, and we are decidedly averse to ever attempting to raise a crop of grass, and weeds, and corn in the same field the same season.

After rolling the ground the second time, we proceed to plant. In doing this, we invariably use the drill, having found by experience that we can raise about one-fourth more corn to the acre, by drilling, than by planting it in the hill. We make our rows three feet nine inches apart, and leave from twelve to fourteen inches between the stalks in the row, or, if the soil is thin, we increase that distance a few inches.

After the corn is up high enough to work, we put in the large cultivator spoken of before, setting back the two front teeth, and taking out the middle one, so that it can be run over the rows, one half on each side, and is drawn by a pair of mules; and we go twice along the same row. As there is a person to go after to set up the corn, one setting up does for the double cultivation.

After standing some two weeks or more, a small one-horse cultivator is put on it, (and, by the way, we think we have the best article of that kind out,) and give it two rounds, or four strokes between every two rows of corn. We then go after with the hoe, and cut out any grass that may have escaped the harrow, and also thin out the corn to what we think about right. We never disturb it afterwards, except to sucker it, until it is ready to cut up.

No. I had 289½ bushels of corn, making 120 bus. and 1 peck per acre.

The crop on No. 2 was more extraordinary still, considering attending circumstances. About twelve years ago, it was an old field, and had not been plowed for forty years, or may be twice that time, and was considered entirely worn out. About 1839 we limed it on the top, fifty bushels to the acre. The following spring we plowed it and put it in corn, which yielded about twenty bushels to the acre. The next spring we sowed it in oats, and we received about ten or twelve bushels to the acre. We next sowed it in clover which was suffered to grow up and lay down until the next fall, when it was carefully plowed under, and the ground manured with compost from the stable, (where we make from 150 to 200 loads of excellent manure every year, and we pur-

pose writing out our plan of manufacturing it, and our experience regarding its benefits, for the "Farm Journal" some wet day, when we have a little leisure,) with about 18 loads to the acre. It was then sown in wheat, and the next season we had about twenty bushels to the acre from it. The stubble was then plowed down and the ground manured as the preceding year, and limed again and seeded in wheat; and we had from it rather more wheat than the year before. It was seeded in clover along with the wheat, in the spring, and remained in grass from that time until last spring, when it was plowed for corn. The clover had pretty much worked out, and a thick-set sward of green-grass had taken its place. We gave it last spring 16 loads coarse barn-yard manure per acre, on the sod, and plowed it under, and then limed the inverted soil. The cultivation it received was just the same as No. 1. This field contained eight and one-fourth acres, and had 894 rows of corn on it, making 108½ bushels to the acre.

No. 3 had never given us a heavy crop of any kind. It lay about a mile from the barn-yard, and never had but one coat of barn-yard manure. It had been limed at different times, and had been in grass about six years previous to being plowed. It was limed on the sod in the fall of '51. Thinking deep plowing might have some effect on it, we plowed it some two inches deeper than ever before. After the corn came up it received about 400 lbs. Chappell's fertilizer per acre, and was cultivated the same as the others. The field contained ten acres and sixty-nine perches, and produced 993 bushels in the whole; making 95½ bu. to the acre.

No. 4 was on a farm two miles or more distant from the home place, and was not under our immediate oversight. It was plowed with a Wiley plow, with one pair of mules attached, and of course was not plowed deep. It was limed on the sod just before plowing, and after the corn was up, we applied about 300 lbs. per acre to it of Chappell's fertilizer. The seed was not good, being picked promiscuously out of the crib just before planting, and at least one-eighth of it never came up. It was re-planted, but the re-plants never came to much. Included in the field was a new clearing, of some three acres, and which was outrageously stony, and withal so grassy, that the hoes though well applied, could not prevent the growth of much of it. It was worked by a one-horse cultivator entirely, and by hoes.

The field contained 23 acres, and produced 1812 bushels of corn, which is 78½ bushels to the acre.

All the fields were accurately surveyed by a practical surveyor. The corn was all carefully measured in a barrel by two persons, and the number of barrels carefully noted down. The barrel was of the largest size flour casks, and was always heaped as much as would lay on it. This same barrel was filled by the same persons that filled all the others, and

in the same way, with the same amount of corn, which was then shelled; and the shelled corn measured, and the calculation made from that. Field No. 2 had some of the largest and finest ears on it that we ever saw. One weighed one pound and thirteen ounces, and there were many others as heavy, if not heavier.

We think it likely that the agricultural salts increased the crops in fields 3 and 4, some eight or ten bushels to the acre.

The yield of these fields are considerably ahead, we have reason to believe, of the average crops of our county; but we see no reason why they should be so. We use no magic, neither do we resort to powerful and transient stimulants. Thorough working of the land, we consider the chief agent of our success. Who is there that cannot do that? Five years ago we raised 110½ bushels of corn to the acre on a field of nearly nine acres. But we relaxed no effort, and now we have, on a small field, beaten that. Who will beat us? E. J. D.

Hopewell Cotton Works,

Ches. co. Pa., Jan. 20th, 1853.

For the Farm Journal.

Directions for Measuring Cattle so as to ascertain their Weight while Living.

SELECTED BY J. M. HARLAN, FROM A FOREIGN WORK.

This is of the first utility for all those who are not experienced judges by the eye, for by following these directions, they will come to the weight within a mere trifle:

Take a string, put it round the beast, standing square, just behind the shoulder-blade; measure on a foot rule the feet and inches the animal is in circumference; this is called the girth; then with the string, measure from that bone of the tail which plums the line with the hinder part of the buttock; direct the line along the back to the fore part of the shoulder-blade; take the dimensions on the foot-rule as before, which is the length, and work the figures in the following manner:

	ft. in.
Girth of an ordinary bullock, - - -	6-4
Length along the back; - - - - -	5-3

Which, multiplied together, make 31 square superficial feet. That again multiplied by 23, the number of pounds allowed to each superficial foot, of all cattle measuring less than 7 and more than 5 feet in girth, makes 713 lbs.; and allowing 14 lbs. to the stone, is 50 stone, 13 lbs. Where the animal measures less than 9 and more than 7 feet in girth, 31 is the number of lbs. to each square superficial foot.

Again, suppose a pig or any small beast should measure 2 feet in girth, and 2 feet long.

Girth of a small pig, - - - - -	2 feet.
Length along the back, - - - - -	2 "

Which, multiplied together, makes 4 square feet.

That multiplied by 11, (the number of lbs. allowed for each square foot of cattle, measuring less than 3 feet in girth,) makes 44 lbs.; which, divided by 14, to bring it to stones, is 3 stone 2 lbs.

Again, suppose any calf, &c., should measure 4 ft. 6 inches in girth, and 3 feet 9 inches in length—say,
 Girth, - - - - - 4 ft. 6 in.
 Length, - - - - - 3 " 9 "

Which, multiplied together, makes $16\frac{1}{2}$ square ft. The square superficial feet and inches being multiplied by 16, the No. of lbs. allowed to all cattle measuring less than 5 and more than 3 feet in girth, make 264 lbs.; which, divided by 14, to bring it into stones, is 18 stone, 12 lbs."

The dimensions of the girth, and length of black cattle, sheep, calves, or hogs, may be as exactly taken this way as is at all necessary for any computation, or for the purpose of valuation of stock, and will answer exactly to the four quarters, sinking the offal; and which every man who can get a bit of chalk, may easily perform. These calculations are 14 lbs. to the stone, which is the general weight; but it is as easy to divide by any other number of pounds.

N. B.—A deduction must be made for a half-fatted beast of 1 stone in 20, from that of a fat one; and for a cow that has had calves, one stone must be allowed, and another for not being properly fat.

J. M. H.

Jan. 8th, 1853.

For the Farm Journal.

Vegetable Nutrition.

A writer in the January number of the Albany Cultivator, has given parentage to a new theory of vegetable nutrition.

The theory, however, as there laid down, is so incomplete in its details, as not to furnish to the reader sufficient ground either to adopt or repudiate it. It would greatly aid the cause, if all writers on scientific subjects would lend the weight of their names to their productions. I am well aware that in political discussions, and to mere literary productions it is not required that the author's name be made known. But when a writer enters the lists to combat the received theories as laid down by such men as Liebig, and Lawes, and many others that I could name, I think the reader entitled to the name of the author of the conflicting theory. I have said that the author has not sufficiently defined his position, and in this I apprehend I will be seconded by every reader of the article in question. Will the author please furnish the readers of the Cultivator with the details of his theory? When the public are fully informed as to what phenomena the writer contends for, the time for discussion will have arrived, and for myself, I will promise him a patient hearing, and an impartial judgment.

G. BLIGHT BROWNE.

Gwynned.

For the Farm Journal.

DRILLING WHEAT.

Report on the best method of putting in Wheat, read before the Union Township Agricultural Club, Dec. 25th, 1852.

Mr. PRESIDENT, GENTLEMEN, &c. :

In accordance with a resolution of our last meeting, by which the question, "Which is the best way to put in wheat—by the plow, drill or harrow?" was referred to me to report on, I respectfully submit the following remarks:

It is a question upon which there is probably as much difference of opinion as upon any one in the wide field of agricultural labor; and every one engaged in the cultivation of the soil, should feel himself deeply interested with a subject that so materially affects his labor, and determines the success of his prospects.

Undertaking the task with diffidence, I shall endeavor briefly to present a few remarks, as derived from observation, inquiry, and such collateral information as I could command during the limited period assigned me. Not, however, with the view of assuming the character of dictator, or insisting upon my opinions in preference to those of others, but rather to awaken a spirit of inquiry among those interested, into the different methods, stimulating them to decide their value by the test of utility, and conformity to the laws of nature.

In determining the manner of sowing or planting any seed, the question first arises—"Where is its natural place of vegetation?" Is it upon the surface of the earth, slightly covered, or deep underground? which differs greatly with different seeds. While we find some germinating readily upon the surface, others might lie there until entirely decayed, and show no signs of life; whilst, had they been covered with earth, they would soon have brought forth a new plant. Some vegetate by being put a few inches beneath the surface, while others will not germinate for a long time, or probably never, unless buried to the depth of twelve to eighteen inches; and, some again, will not vegetate at all by being put too deep under ground. Thus we see, that in all cases, due regard should be had to the laws of nature. Observation teaches us that wheat will vegetate as readily on the surface as in any other situation, when combined with a sufficient quantity of heat and moisture, which is essential to vegetation in all cases. Most of you who are engaged in farming, have no doubt experienced this to your regret and disadvantage: when, after having cut your wheat and put it up in the best manner possible, to receive the genial warmth of the sun for a few days, a warm, protracted shower of rain fell on it, and on going to your field you found that it had germinated almost instantaneously, even on the tops of the sheaves; so that, in many instances, you were obliged to open out the sheaves in order to dry the wheat and stop its

vegetation, while many heads being left on the ground, had sprouted to considerable length. This is conclusive evidence, that so far as vegetation is concerned, wheat does not require to be deeply buried, but will most readily germinate on the surface, or by being put in deep enough only to afford the necessary heat and moisture. And as our mode of treating it should be as nearly in accordance with the laws of nature as may possibly be, we are led to the conclusion that it should, in all cases, be covered enough only to protect it from the *extremes of heat and cold*, in which we must be guided, in a great measure, by the time, soil and climate.

As to implements, the harrow, or, something similar to it, was probably one of the first made use of for putting in grain. We are informed that in some of the Oriental countries, the marshes and wet grounds along the rivers were prepared for the reception of the rice by no other tillage than the treading of their oxen, asses, &c. And having been thus rudely prepared before sowing the rice, the same was afterwards covered in a similar manner, by these untutored cultivators. Others again, instead of the strong and well-constructed harrows that are found upon our farms, had a few logs of wood or the branches of trees coarsely tied together, and dragged over the ground. In many countries still, wooden harrows are more common than those which grace our farms. And in every instance, it will be seen that the improvement of implements has kept regular pace with the advancement of agricultural science itself—leaving us still, as ever, in an age of improvement. A large proportion of the wheat now sown, is, no doubt, put in by the harrow, principally, perhaps, because it is a cheap instrument, and will answer the purpose. From what has been said respecting the vegetation of wheat, the impression might, perhaps, be left on the minds of some, that it was the only proper instrument; but as it must be protected from the extremes of heat and cold, and for other causes, we find its use attended with decided disadvantages. After sowing a field broad-cast, and harrowing over it, there is frequently, if not always, a considerable quantity left uncovered, which is generally destroyed by the fowls of the air; if not, it will immediately vegetate, and, subjected to the scorching heat of the sun for a few days, it withers and dies. Actual experiment has also shown that some which was slightly covered and exposed to the immediate action of the rays of the sun, sprung up suddenly, but not having sufficient earth to retain the requisite amount of moisture, soon faded away, while that which was slightly shaded, perhaps by a few clods only, was enabled to retain its moisture, and consequently grew up vigorously. But again; unless the ground is entirely free from all rubbish, the harrow is very apt to drag the grain together, thus distributing it unequally, crowding it in some

places, so that it will not have sufficient room for a vigorous and healthy growth, leaving none at all in others. The former may frequently be seen by the presence of many heads of a diminutive size, the latter, as a natural consequence, by the entire absence of any. Thus, we may conclude that by harrowing in wheat, a great deal of the seed is entirely lost, not only by not being covered at all, but also by being buried too deeply, or not enough so. In the latter case, it is also more apt to be winter-killed.

The plow is used by many of our farmers in preference to the harrow, and is, no doubt, under many circumstances, superior to it; but it is, perhaps, chiefly used, only for the want of a better implement. Its use is generally attended with an increase of labor. So much so, that the difference of it alone, for a few seasons taken together, would purchase implements much better suited to the purpose. Like harrowing, ploughing in grain is also a wasting of seed. While it is, in general, more effective in covering the seed, there is still some left uncovered, and the rest quite unevenly, which will, of course, make its appearance at different periods, and be more or less retarded, crowded and unequally nourished during its growth, and some, perhaps, buried so deeply as never to come to light. The cultivator is, by some, preferred to the plow or harrow, as a medium between the two, and is, perhaps, superior to either, under certain circumstances. But the whole system of broadcast sowing is more or less defective, compared with the more regular one of drilling, which is made apparent by its yielding, in most cases, less per acre from the same quantity of seed, and many times, even from a larger quantity.

Drills were utterly unknown until some time in the sixteenth century, and to the celebrated *Jethro Tull* is accorded the honor of having been one of the first to construct and make experiments with machinery in the art of culture. The drill was certainly a great improvement upon all other implements, but like every thing else in the progress of improvements, it was viewed as an innovation upon the old established customs. But after repeated trials and experiments, it established successfully its claims and superiority, and but little wheat is now sown broadcast in the most highly cultivated countries, which is a sure presage of its merit. It is not only a saving of seed, which alone is a consideration of no little importance, but facilitates labor as compared with the plow, and besides, it seems to be admirably adapted to conformity with the laws of nature—avoiding, exposing a large portion of the seed on the surface, by covering it all, which is absolutely necessary for its protection, in our climate; as also its being buried too deeply, which is a material injury to its vegetation. A greater number of acres can be sown per day, more evenly covered, thus considerably lessening the cost of agricultural labor, and giv-

ing it all an equal chance to come to maturity. Consequently, when the wheat is gathered, the product is found to be much greater than when sown broadcast, in many instances, from twenty to twenty-five per cent., and some times even more.

Taking all things into consideration, I should prefer the drill to either the harrow or the plow, as better suited to the wants of nature, therefore, more profitable to the farmer. A great deal more might be said, but as these remarks have already been protracted beyond their intended limits, I will close; not, however, with the presumption that you should adopt my views simply, but confidently hoping that you will be awake to a judicious inquiry by practical experiments, and thereby be enabled more fully to judge for yourselves.

In conclusion, I beg your attention to a few extracts, in confirmation of my preference for the drill. Mr. John Jones, of New Castle county, Delaware, says, "When I commenced drilling, and for two or three years, I was ridiculed by my neighbors; some would advise me to take the implement home, break it up, and cook my dinner with it. I, however, disregarded their jeers, and persevered. And now, the best evidence that I can possibly bring forward in support of the drill over the broadcast system, is the fact that all my neighbors have adopted the drill for sowing their wheat and most other small grain. I am much in favor of sowing with the drill, and of thin sowing. I harvested *twenty-four* bushels per acre from a field of *eighty* acres in 1847, from *eighty-eight and a-half* bushels sowing with the drill." He also says: "The experiments with the drill and broadcast on Dr. C. Noble's field, resulted in a yield of *twenty-seven* bushels per acre of broadcast, where *two* bushels had been sown: and *thirty-five* per acre, where *one and one-fourth* bushels had been sown from the drill; land similar in every respect; the variety of wheat, Mediterranean; showing an increase in favor of the drilled, of *eight* bushels per acre, besides the saving of seed. The yield of additional straw on the drilled acre, 12 per cent. Yield of additional wheat on the drilled acre, 27 per cent."

For a more full account, see *Patent Office Report* for 1848, page 467; also *Monthly Journal of Agriculture*, for 1846, vol 1, p. 586.

An account of very interesting experiments made by a member of the "Society of Friends," and laid before the Council of the "Royal Agricultural Society of England," proves that wide drilling will yield more per acre than narrow, with the same quantity of seed,—that the rows should be at least nine inches apart. See *Monthly Journal of Agriculture* for 1846, vol. 1, p. 461.

SAMUEL BRUGGER.

For the Farm Journal,

Letter from H. Shubert, on Imported Cattle.

A premium has been awarded at the late exhibi-

tion of the S. A. S., for Holstein cattle. Twenty years ago, when traveling in Europe, I went through Holstein, so famed for Holstein butter!

The Dutchy of Holstein is situated at the mouth of the Elbe, where it flows into the North sea. The Elbe is one of the largest rivers in Germany. In its course of 800 miles through the most fertile part of Germany, it brings down a rich alluvial soil, which is thrown back to the shore by the setting in of the tide. Every year some land is gained at the mouth of the river, in throwing up dikes to keep out the tide. This alluvial soil, becoming mixed with Phosphate, so abounding in the sea, forms the richest pasture of natural grass, not to be equalled. It is the saying of the cow-herds there, (perhaps a little exaggerated,) that, on loosing the staff in the evening, in driving the cows together, they cannot find it the next evening, the grass having grown over it. This rich soil is along the river. Eight or ten miles from it, into the interior, the soil is poor; and of course the cattle looks poor. Is that not a sufficient proof of the folly to import the Holstein Cattle, unless the pasture is also imported.

The milk veins of cows develop themselves in proportion as the cows are well taken care of, and have a rich pasture. Phosphate is a main requisite to produce the quality and quantity of milk. The soil in Pennsylvania is deficient of it, but in our Western States the soil contains more, therefore the Western cattle are superior to the Pennsylvania cattle. Crossing certainly improves the breed, but that can be as well obtained in bringing the breed from our Western States, than to bring them from Europe with the appendage of a pompous pedigree.

H. SHUBERT.

Bethel, Berks co., Nov., 1852.

Hybrid Ducks.

For the Farm Journal.

MESRS. EDITORS:—

Has the assertion in the Books* that the female hybrid progeny of the musk and common duck, "will pair with the common drake and produce a good sort," ever been verified by you or any of your fowl amateurs; or is it like much of the stuff in Poultry Books—nonsensical?

Some beautiful hybrids were raised here in 1851, some of which were exhibited at the State Fair, where their large size and beautiful appearance were much admired. They were as much in demand for breeding stock, as Mr. Newbold's Capons.

One of the finest of the ducks was kept all last season with a large common drake, but never produced an egg. Will she begin when a year older to "produce a good sort?"

NOVICE.

Jan. 8th, 1853.

*American Poultry Yard, by Brown.

For the Farm Journal.

A Model Barn.

[A Correspondent sends us the following account of a Model Barn, on the farm of *George Wilson, Esq.*, near Bellville, Mifflin county, Pa.]

It is a hundred and seventeen feet long, by sixty-five wide; there is stabling under the whole, except a wagon shed at the one end, the whole width of which is twenty-two feet, and is as long as the barn is wide, made to drive through; an arched cellar of thirty feet in length, and eight or ten wide; takes up a part of the wagon shed. Above the stabling are the hay-mows; then seven or eight feet above, is the main floor running the whole length of the barn—the entrance being at the end; under this is another floor forty by eighteen feet running across the barn—used for cleaning grain; under the main floor are the graneries,—corn cribs are over the wagon shed on either side of the upper floor—threshing machine is arranged with horse power in the main floor at one side, so as not to be at all in the way, and the horses work in the wagon shed beneath,—an upright post passing through the floor, and connected with the main wheel. Horses and driver are always in the dry—protected from a hot sun in warm weather, and from the chilling blasts of the cold, inclement season. The straw and other things for the manure yard passes out in front over a scaffold level with the upper floor, which it at least twenty feet high, making it very easy to put out a large amount of straw. The hay all descends seven or eight feet below the upper floor before it reaches the bottom of the mow, so that it is no trouble to unload it, but without a more minute description I must say that this is the most convenient barn that I have ever seen. It is not the "double decker" barn of which there are many in some parts, but this one was planned by the owner, projected by him alone, his carpenters working by his directions. The whole cost was about \$3,000—it is on a fine farm of near two hundred acres of tillable land.

R. F. W.

For the Farm Journal.

Management of Poultry.

MUNCY, Pa., Dec, 20th, 1852.

MESSRS. EDITORS:—

As you solicited in a late number of your valuable Journal, an exposition of the views and experience of those engaged in agriculture and the rearing of stock, I am induced to give you my experience in raising Poultry. Having from my youth had a strong attachment for the feathered tribe, I procured, about a year since, a fine pair of Chittagong chickens, which I placed in company with six other hens, (the common dung-hill fowl,) and from the seven hens I raised upwards of 130 chickens the past season. I confined the laying hens, together with the chickens, after they became large enough to be mischievous in the garden, in a yard not exceeding twenty feet square, and although thus

confined, I succeeded in raising more chickens than many of the large farmers in the vicinity, who gave theirs the range of their large domain.

The practice observed was this:—On taking the hens from the nest, I tied them to a barrel, laid lengthwise on the ground, where they were allowed to remain until the chicks became large enough to be placed in the yard. But it was to the feed that I attributed my success. On taking the chicks from the nest, I fed them on *hard boiled eggs*, chopped up fine, for the first few days. When two or three days old I give them an alternate feed of corn meal, slightly dampened, but entirely discarded all sloppy mixtures. After the elapse of a week or ten days, I commenced giving them *whole wheat*, which I have invariably found to agree with them better than any other grain. I still, however, continued to feed the egg until they got to be ten days or two weeks old, and what seemed to be most singular was, I had not a single case of gapes in the whole flock. That it was attributable to the food given them I am fully satisfied. It was certainly very palatable to them, and in my opinion, is the most *natural* food that can be given to the newly hatched chick. Whether new to your numerous readers or not, I am not able to say. The same practice was adopted by some of my acquaintances with like success.

I, however, from the small amount of liberty enjoyed by my flock, had a most formidable enemy to contend with. The vermin became very numerous, which I succeeded in subduing by the free use of grease, which I regard as the cheapest and most convenient remedy, and if persevered in will ultimately exterminate them. I have tried it, and although not new to your readers, I desire to add my testimony in favor of its general use.

P. J. P. W.

For the Farm Journal.

Fattening Poultry.

MR. EDITOR:—

From an old work on Agriculture, published in England some sixty years since, I extract the following remarks in relation to the fattening of poultry, which are at your service.

FATTENING CHICKENS.—Very short time is necessary. If a chicken is not fat in a week, it is distempered. Poultry should be fattened in coops kept very clean. They should be furnished with gravel, but with no water. Their only food barley meal, mixed with water, so thin as to serve them for drink. Their thirst makes them eat more than they would, in order to extract the water that is among their food. This should not be put in troughs, but laid upon a board, which should be washed clean every time fresh food is put upon it. It is foul and heated water which is the soul cause of the pip. The preventive is obvious.

FATTENING GESE.—As soon as the frost has set in,

(usually towards the end of November,) they are shut up, to the number of ten or twelve (not more) in a dark still place, where they can neither see light nor hear the cries of those kept for laying. They remain in that prison until they have attained the greatest degree of fatness, and are ready for killing; that moment should be seized, otherwise they would very soon turn bare and die. They are then crammed twice a day, by putting into their craws (by means of a tin tube) as much as it will hold of maize (Indian corn) boiled in water. The tube is used because the bill of the goose, being furnished with teeth, the person who should attempt to perform that operation by hand would soon have them scratched and torn to pieces. By this means, the goose acquires a prodigious fatness, so that a pair sometimes weigh from fifty to sixty pounds. Their liver weighs from one pound to a pound and a half—is white and delicate; but has a slight bitterness to the taste, which the liver of the duck has not. The hearts are large like a small apple; and when dressed on a gridiron are excellent eating. The feet are boiled, after which they are fried the same as the tongue.

Here is the process for fattening ducks. I do not know how it will suit the tastes and inclinations of your readers; but certainly the idea of eating ducks that have been suffocated, is not the most pleasant.

FATTENING DUCKS.—When the ducks are pretty fat by the usual mode of feeding, they are shut up in companies of eight in a dark place. Every morning and evening, a servant puts their wings across, and placing them between his knees, opens their bills with his left hand, and with his right fills their craws with boiled maize. They sometimes die from suffocation; but they are not a bit the worse for it, provided care is taken to bleed them directly. The unfortunate birds pass their fifteen days in a state of oppression and suffocation, which causes their livers to enlarge, and keeps them always panting, and almost without breathing. When the tail of the duck spreads out like a fan they know that it is fat enough. They are then turned out to bathe in clean water, after which they are killed. When the ducks thus crammed have been picked, they seem balls of fat, and none of their members are visible. S.

For the Farm Journal.

Theory of action of Lime used in Agriculture.

BY G. BLIGHT BROWNE.

[Continued from page 336.]

Lime may exist in the soil, combined with the acid that is the result of vegetable decomposition, and it may also be combined with silex, and in either case, it would not be capable of performing its proper office.

As late as in 1850, we are told by Prof. J. T. W. Johnston: "Lime acts in two ways upon the soil. It 'produces a mechanical alteration which is simple 'and easily understood, and is the cause of a series

"of chemical changes, which are really obscure, and 'are as yet susceptible of only partial explanation.

"In the finely divided state of quick-lime or slack-lime, or of soft and crumbling chalk, it stiffens 'very loose soils, and opens the stiffer clays; while, 'in the form of limestone, gravel, or of shell sand, 'it may be employed either for opening a clay soil 'or for giving body and firmness to boggy land. These 'effects and their explanation are so obvious to you, 'that it is unnecessary to dwell upon them."

To my mind, the chemical changes effected by lime, do not present any obscurity, and I contend that they are susceptible of entire explanation. But if we admit that it can effect all the mechanical changes attributed to it by the learned author, I confess that these effects and their explanation are not so obvious to me; but that they are really obscure.

In considering the mechanical effects of lime on our soil, we must keep constantly in view the small amount usually applied to the acre, and the immense amount of earth that this minute proportion of lime is expected to act upon. If we apply fifty bushels to the acre, which, at this time is considered a full dose, let us calculate in what proportion the lime will be as regards the soil.

We have seen that an acre contains 43,560 feet, superficial. If we divide this amount by 50, we have 871 feet for each bushel of lime. The small amount that can be allotted out of one bushel to each of these 871 superficial feet, would render it almost impossible that any purely mechanical effect could be produced. But we have other authority for attributing great mechanical effect to lime. Professor J. J. Mapee lays it down with a degree of certainty truly astonishing: the exact mechanical effect of lime on the different soils. Whether the learned Professor has imagined the existence of these phenomena, or whether he sees with microscopic eyes, I am unable to say, but I have sometimes had it suggest itself to my mind, that he was only following in the footsteps of some illustrious predecessor, who wrote it down because he thought it should be so.

We are told by the learned Professor at page 227 of his December number for 1852: "Some sandy 'soils are rendered more tenacious by the use of lime, 'particularly when accompanied by the addition of 'organic matter; others are injured by the application of lime. When the ultimate particles of sand 'are spherical, and they are often found to be so when 'previously acted upon by water, slight rains lubricate these polished surfaces and cause the sand to 'pack. The addition of lime to such land, applied 'in the caustic form, roughens these surfaces, forming silicate of lime, and prevents the mechanical condition before referred to. Some lands are materially benefited by the application of plaster, both 'from the addition of its chemical constituents, and

"its peculiar mechanical action in the attachment of "particles."

We are here told by the learned Professor that lime loosens a sandy soil that is composed of round sand, because it has a tendency to take the polish from the surface of the sand. In the first place, I deny that lime applied in the caustic state at the rate of fifty bushels to the acre, can or will do any thing of the kind. Caustic lime applied to a loose sandy soil, such as is here described, would not long remain caustic, but would soon be a carbonate; long before it could be so intermixed with such an overwhelming amount of sand as to cause any sensible effect. The quantity of lime would be too small to have any effect on the sand, even if it did not become a carbonate without delay. Caustic lime does not speedily combine with silex, at the ordinary temperature. And last but not least, I deny that the roughening of the surface of such sand would hinder it from packing, or render the soil composed of such sand more loose. But the effect of a dose of lime might easily be expected to do wonders in a mechanical way when we are told that plaster, of which so little is usually sown at a time as scarcely to be perceptible on the ground, materially benefits sandy soils by its peculiar mechanical action in the attachment of particles.

The more we consider these mechanical effects that are attributed to lime, the more absurd they will appear to us.

The only mechanical effect that can fairly be attributed to lime, is the result of a chemical phenomena that takes place in the process of decay. We have seen that in the course of decay of the vegetable matter found in the soil, vegetable acids are formed which have more affinity for lime than carbonic acid has. When the carbonate of lime yields its carbonic acid in favor of one or the other of these acids, the carbonic acid is set free in the gaseous state. This carbonic acid occupies a much larger space in its gaseous state than it did when combined with the lime, and by its expansion has a tendency to rend asunder the earth in which this phenomena takes place. In other words, it lightens it in the same way that it lightens a loaf of bread.

I believe that in this way only is the soil mellowed by the presence of lime, and that, in no instance, does it render it more compact. As to the other chemical and mechanical effects that are attributed to it, I believe that none such can be substantiated.

For the Farm Journal.

The Wheat Fly.

On new-years day, 1853, an intelligent farmer, in the vicinity of West-Chester, brought to me a quantity of chaff, which had been blown off in winnowing his wheat, in which were a great number of little, tawny, cocoon-looking bodies, or *pupae* evidently belonging to some insect which had materially injured

the size and quality of the grain. The same gentleman afterwards, at my request, brought to me some unthreshed spikes, or ears of wheat, in which were many of those *pupae* deposited on, or nestling round the grains, within the chaff of the florets. Not being an Entomologist, I could give no account of the injurious little animal; but, for the satisfaction of my inquiring neighbor, I forwarded specimens to Miss MARGARETTA H. MORRIS, of Germantown, a lady distinguished for her attainments in that most important department of Natural History, who promptly honored me with the following sketch of the character and career of the insect; and, at my request, has kindly consented to its publication. If what is known of the history of the mischievous little creature, shall induce intelligent observers to prosecute the inquiry, and thereby enable them successfully to counteract the evil, the subject may be well worthy the attention of the agricultural community, and entitled to a discussion in the FARM JOURNAL.

GERMANTOWN, January 7th, 1853.

"Many thanks, my dear Sir, for the *pupae* of the Wheat Fly, *Cecidomyia Tritici*, [not the "Hessian Fly"—which is a different species, called *Cecidomyia destructor*,] that famous, or rather infamous insect, so well known in New York, and now gradually spreading through Pennsylvania. Your farmer friends may well dread its approach; for no insect need be more feared. It feeds in the blossom of the wheat, where the eggs are deposited. According to HARRIS, the eggs hatch in about eight or ten days; the little yellow maggots may be found within the chaffy scales of the grain, and do not exceed one eighth of an inch in length. From two to twenty are to be found in a single husk of a grain; and sometimes on every grain in the ear. Grain is always more infested by them, when grown two years in succession on the same ground, as they pass their change in the ground, where they remain all winter, unless, as in this case, the crop has been late, and they were not sufficiently advanced to leave their early home. These maggots prey on the grain in the milky state; and their ravages stop when the grain becomes hard; they do not burrow into the kernels; but live on the pollen, and on the soft matter of the germ at the base of the grain. Toward the end of July, and the beginning of August, the full-grown maggots leave off eating, preparatory to moulting their skins. The torpid state lasts only a few days; after which the insect casts off its skin. Great numbers of the cast skins are to be seen, immediately after the moulting is completed. Sometimes the maggots descend and moult in the ground. The late broods are often harvested and carried into the barns. It is not usually till June, that they are transformed into *pupae*. The latter part of June, and in July, the perfect insects may be seen rising from the fields where the parent wheat had been grown. Their progress is about twenty or thirty miles a year.

In DR. HARRIS's new edition of his treatise on Insects, he gives the various modes resorted to in New England and New York, to destroy them; a few of which I will mention, as the best: *Burn all the chaff where they are to be found; plough the old grain fields with a deep plough; first sprinkling the ground well with lime.* In those parts of New England where they have done the greatest injury, the cultivation of fall sown or winter grain has been given up; and this, for some years to come, will be the safest course. Late sowing has almost entirely banished the fly from those parts of Vermont where they first appeared; and there is good reason to believe that they will be starved out, when these means are generally adopted for a few years.

The above extracts have been taken from HARRIS;* but they are only a small portion of his long paper; yet all, perhaps, which are absolutely necessary for farmers to know. I can assure them, however, that they had better be up and doing; or they will sorely repent their supineness.

I will put these pupae in a glass jar with some earth, and hope to raise some of the Flies; when, if I succeed, I will send some in the perfect state to you, that the enemy may be known face to face."

DR. HARRIS says, this insect seems to have been long known in England;—as appears by an extract of a letter, written in 1771, and published in the Philosophical Transactions for 1772. "The wheat fly is said to have been first seen in America, about the year 1828, † in the northern part of Vermont, and on the borders of Lower Canada. From these places its ravages have gradually extended, in various directions, from year to year. A considerable part of Upper Canada, of New York, New Hampshire, and of Massachusetts have been visited by it; and, in 1834, it appeared in Maine, which it has traversed, in an easterly course, at the rate of twenty or thirty miles a year. The country over which it has spread has continued to suffer more or less from its alarming depredations,—the loss by which has been found to vary from about one-tenth part to nearly the whole of the annual crop of wheat; nor has the insect entirely disappeared in any place, till it has been star-

ed out by a change of agriculture, or by the substitution of late-sown spring wheat for the other varieties of grain.

W. D.

West Chester, Penna., Feb. 7, 1853.

For the Farm Journal.

Insects and Birds.

Without a doubt the great preponderance of noxious insects, is in some degree occasioned by the indiscriminate destruction of birds. There are large numbers of the feathered tribes that live almost exclusively upon insects, and these should, under all circumstances, receive the encouragement and protection of men. The *Hirundina*, or swallow tribe, particularly, are the most industrious and indefatigable little friends of mankind that, perhaps, belong to that class of the animal kingdom. Several species of them, too, are semi-domesticated, and prefer the habitations provided by men, as places of shelter in which to rear their young. The common chimney swallow, (*Acanthytis pelagica*), the barn swallow, (*Hirundo rufa*), and the purple or house martin, (*Progne purpurea*), are familiar, especially to farmers and villagers, if not to those who reside in larger towns and cities. But their general usefulness, connected with the destruction of insects, may, perhaps, not have been so duly considered by those, even, who have been wont to greet their coming every year, as the harbinger of a more genial season. When it is fully considered that these birds usually rear from two to three broods of young before they take their departure again in autumn; and that insects constitute the entire food of the whole family, the important office they perform in the economy of Nature, can only be estimated and properly appreciated. Some years ago I shot a chimney swallow as a specimen for scientific preparation, that could not have been more than an hour on the wing in the morning, when, on opening its crop, I found that it contained over two hundred of the smaller tribes of insects, principally two-winged flies (*Diptera*). There are also other families of birds that are partial to or live wholly upon insects. The fly catchers, (*Muscipidae*) the warblers, (*Sylviade*) amongst the latter the industrious little willow wren, (*Sylvia trochilus*) and also the Titmouses, (*Parus*) the common Blue Bird, (*Sialia Sialis*) the Oriole or Golden Robin, (*Icterus Baltimore*) and a host of others that visit forests, orchards, and gardens, in early spring when the trees are in bloom, for the purpose of feeding upon the various species of insects that are attracted thither by the odor and nectar of the flowers, or for the purpose of depositing their eggs in the opening calyx. When it is known that this is the time when the eggs are deposited that produce the insects so injurious to cherries, plums, pears, &c., it will also be seen of what service the birds are to the trees and the fruit. Often when the fruit is ripe there are certain species of birds that

*THE TREATISE ON INSECTS INJURIOUS TO VEGETATION, by THADDEUS WILLIAM HARRIS, M. D., is an invaluable work, which ought to be in every Library, public and private; and should be diligently studied by every young American farmer.

†It may, perhaps, be doubted, whether this was the date of its first appearance, as I find, in DUNLAP'S PENNSYLVANIA FARMER, of February 24, 1777, a notice of "THAT DESTRUCTIVE INSECT CALLED THE WHEAT FLY," by THOMAS GILPIN, which seems to refer to an insect similar to this; though possibly it may have been some species of *WEVIL*. "These insects," says Mr. GILPIN, "begin to hatch, or rather to come out of the grain in the dry state, soon after the wheat is reaped, and these are the produce of eggs laid on, and in the heads standing in the field; when the grain is in the milky state, or before harvested; from this brood is produced a succession of broods or flies, each female fly laying from fifty to seventy eggs, which hatch and go into the grain, producing others in about six weeks alternately, until they have eat up, corrupted, or spoiled all the grain they can come at, until winter comes on,—at which time, or soon after hard frosts appear, they cease, and all the fly with out the grain dies, and those within, in the matted state, remain inactive, or nearly so, till spring; when, some time in April, but mostly in May or June, they hatch, and the spring flies produced from the winter maggots are much stronger and larger than the fall flies; these, when the wheat is in the milky state, fly away to the fields, light on the standing grain in the dusk or evening twilight, where they lay their eggs in and on the ears, which produce as before."

visit the trees for the purpose of searching after insects; and even where they have perforated the fruit it has been more on account of the larvae it contained, than for the fruit itself. Some years ago a neighbor of mine was wont to take a station near a fine tree of ox heart cherries, and remain there (gun in hand and powder flask well filled) all day, shooting indiscriminately every thing bearing the form of a bird that dared approach it; and at each shot I ween he destroyed more fruit than all the birds that visited it for that purpose would in a whole day; besides doing an incalculable injury to the tree in permitting the insect broods to mature, by keeping off their natural enemies. I have often even doubted the utility of setting up scare-crows, to prevent birds from visiting corn fields in the spring; for they just as often are after the various kinds of insect larvae, especially cut-worms, (which their instincts teach them are somewhere in the vicinity of the corn hill) as they are after the corn itself; particularly after the corn has germinated. Witness, for instance, how industriously and regularly crows, black-birds, Robins, &c., will follow the furrow in spring plowing, and eagerly darting after every-thing of a creeping nature that is turned up by the farmer. Some of the Gallinaceous families, or common fowls, &c., especially turkeys, perform an important office as insect scavengers, and therefore large stocks of poultry might be made profitable to the farmer in more ways than one. It is well known to tobacco growers, that a flock of turkeys turned into a tobacco field, will, for the time being, perform as much labor, almost, and as well, as so many persons. In order to restore a healthy equilibrium between birds and insects, the destruction of the former should be prevented by public opinion or stringent laws. In this enlightened age, the merciless destruction of Tom-Tits, Catbirds, and Sparrows, is a species of "sport" of a very equivocal character; and the sooner it is brought to an end, the better for the cause of Agriculture, and of common humanity.

S. S. R.

Lan. Feb. 7th.

For the Farm Journal.

Landscape Gardening, No. II.

This embraces three distinct branches, united, yet differing materially in their scientific principles. The first, street gardening, I briefly alluded to in my last, and shall now speak of the second or suburban style.

In forming a garden, around, behind, or before a house in the suburbs of our cities, the first thing to be looked at is the architectural structure of the building. If it be in the Gothic style, the gardener must study, as far as the ground will admit, to conform to the same general effect, viz: to have an uneven surface, introducing groups and walks and terraced borders. This must be done with a strict

eye to chastity of design, the least variation from which will make the whole a burlesque.

If the structure is of the Corinthian order, then the more plain and simple the better, either by making figures mathematically, with box or other edging, the whole forming beds for flowers, to be planted according to their different species, or by laying the whole down in grass, and out of this cutting irregular figures or scrolls, so that the grass is kept clear of them. Nothing is worse than to stud the lawn with promiscuous planting.

It is of the greatest importance that the ground should be properly graded, and to do this it is not necessary to turn every thing up side down; all alterations are not improvements; which we see by every day's experience.

"Cut, cut, he cries, yon gloomy trees.

Lay low yon ivied pine."

This is easier done than remedied afterwards. The gardener should go to work cautiously. In grading and planting, for suburban gardens, it is his duty to look around, and take advantage of all that is beautiful, and cover up what is disagreeable. Plant evergreens of dense habit to keep the latter out of sight, such as the Norway Fir, and grade the ground so as to open up even to a landscape view of your neighbor's glade. All this can easily be done by a *real gardener*, who understands his business. "My place ought to look well, it cost me a deal of money." "Yes, it might have cost you one half less and looked a great deal better. The fault is your own, you knew nothing of the matter yourself, and you entrusted it to one who knew less." Here is the secret, the experienced and professional gardener wants two dollars a day; the other will work for a dollar. The one dollar a day man, takes six weeks to spoil and make bad, look worse. The other would have accomplished in two weeks, and made it look right. Which is the cheapest?

After grounds are properly adjusted and put in order, no great talent or large experience is required to keep them so. The little exertion required, combined as it is, with the purest and most rational enjoyment, amounts to but recreation; and often results in renovated health, increased appetite, and at night refreshing sleep, cheating the Doctor out of his fee. I often hear ladies (to whom the cultivation of flowers properly belongs) exclaim, I like to have my beds and borders in proper order, but house-work interferes and takes all my time: and besides, if fixed up ever so well in the morning, the children will have it all torn down in the evening. By your leave, fair ladies, this objection will not hold good. Whenever I see a disordered and dirty garden, I am prepared to see the same kind of a kitchen; and the children may be as easily trained to let the flowers alone, as the porcelain. You have taught them not to break a cup, or enter the parlor with dirty feet; and surely, the little

Misses especially, will take more delight in a full blown rose, and other beautiful productions of *nature*, than to wish to destroy. Instill into them a love of the beautiful in *nature*, and you will have no difficulty in keeping your borders in good order.

SCOTICUS.

For the Farm Journal.

Farm Fences.

MESSRS. EDITORS:—

Within the last year I have obtained possession of a farm containing a little over one hundred acres; lying in the form of a right angle parallelogram, and which, according to the advice of some of our most skillful and most experienced farmers, I design dividing into ten enclosures of equal dimensions; but which I find, according to my estimate of intended improvements, will require 1330 panels of post and rail fence, costing, here, \$1 12 per panel, making \$1492 52.

This appears to be a very large sum to expend for the purpose of confining my own cattle in my fields and those of other persons off them; but as we are required by the laws of our State to erect good line fences for the benefit of others, or submit to the depredations committed upon us by their cattle, I suppose it is idle to complain of so unjust a tax.

If our own State can be taken as a criterion, I feel confident there has been more money expended within the last two years, in erecting and repairing fences, than one third of our farms would sell for, and that it will exceed the cost of all our towns and cities combined. It is this enormous burden which, like an incubus, has been keeping down the agricultural interests of our country; and the freedom from it which has enabled the North of Europe, with a climate not as genial as our own, and a more indifferent system of culture, to undersell us in the markets of England.

And since we are denied protection from foreign imposition, I think if we wish to compete with European labor, we must seek a release from the heavy taxes imposed upon us at home, both by ourselves and by the laws of our State; and expend those taxes in improving our farming.

My design in writing, Messrs. Editors, is to call the attention of farmers to the enormous cost of fencing our farms; for I am confident not one in a hundred could tell you what the enclosing and subdivision of their farms cost them; and also to inquire, through the "Farm Journal," of some one experienced in the soiling system, whether it would not be greatly to my advantage to remove all my division fences on my farm, of which there are are enough to form the half of the out line fences, and to expend the money which it would require to divide it into ten fields, (amounting to \$855 00 in the erection of sheds, the making of manure, and otherwise improving my

farm? If so, what grain and grasses, and what number of acres of each it would require to support 25 head of cattle through the summer? What kind of roots, and what quantity, would be necessary for winter feed? Also, how many acres less will it require to support those cattle by soiling than by pasturing, and what labor it will require to attend to them; with any other information which would be of benefit to one unacquainted with the soiling system. It seems to me that the greater quantity and improved quality of the manure made, with the produce of the land which the fences would otherwise occupy, amounting to one and two-thirds acres, would pay for the labor; and that the interest of the money invested in fencing, with the repairs, and the produce of the land saved by soiling instead of pasturing, would be clear gain. I do hope some one acquainted with the soiling system will be kind enough to answer my queries.

RUSTICUS.

Oakland Farm, Jan. 7, 1753.

For the Farm Journal.

Dwarf Locust.

As an ornamental tree, nothing can be more beautiful than the Rose Acacia, or dwarf locust, grafted upon the yellow locust. In addition to the beautiful profusion of flowers which it bears, the foliage, and top of the tree (which is round, umbrella shaped) is beautiful. The flowers are much larger and more abundant than when grown on its own root; and when grafted in the spring in the ordinary way, grows very easy. I have never had one scion to fail; but they grow so rapid, and bear such a profusion of flowers the first year, that the flowers must be broken off, and the grafts shortened in, or they will break down before they have formed a connection with the main stem. But after the first year they become strong at the connexion, but they should still be shortened in a little, or they will sometimes break down when in bloom.

The curiosity a person has to see them in bloom, and the regret one feels in cutting off the grafts when growing so beautiful, frequently causes their destruction the first year; which is certain unless they are shortened in and the flowers broken off.

DAVID MUMMA, Jr.

Portsmouth, Dauphin co. Pa., Feb. 7, 1853.

For the Farm Journal.

Basket Willow.

The subject of raising willows for basket making and other purposes, mentioned in the Farm Journal for February, is worthy the attention of those having lands suitable for growing them; but our experience has, I think, not been sufficient to determine the kind best suited to the purpose in this country, and the confusion as regards names among those who have undertaken to describe the numerous species, render it very difficult to obtain the less common European species true to name. Of the *alba*, which is the Hunt-

ingdon Willow, described in Shelby's work on British forest trees; I obtained a tree imported four years ago from England; it is a fast growing, upright tree, and is described as among the largest growing of the genus; it is rather less spreading in habit than the *Russelliana*, and appears likely to be as suitable as that species for most purposes for which they are used; the shoot of both I suppose will be found too coarse for fine work.—The *Russelliana*, the Bedford willow of London and Selby, is the best known here of any imported species, except the weeping willow and yellow willow (*Babylonica* and *Vitellina*), being our large common green willow. Loudon, who mentions 170 species as introduced into Britain, names as best for basket making, the following species, viz: *Viminalis*, which he describes as growing from ten to twenty feet high; *Forbyana*, five to eight feet; *Decipiens*, thirty to forty feet; *Helix*, ten to twelve; *Vitellina*, thirty to forty; and *Purpurea*, three to four feet; and besides, mentions *Rubra*, triandra, *acuminata*, and some others as suitable. Of *Viminalis* I have twice purchased a specimen tree under that name, and have one growing, but am satisfied that I have not the species described by Evelyn, or Loudon, as *Viminalis*. I have the *Forbyana* from three different persons, and believe that I have the species correct; this makes long slender shoots; I have one before me seven feet long and one-third of an inch in diameter at the base, and it appears to be the most suitable for baskets.

The *decipiens* or Welsh Varnished willow, much cultivated as basket willow in England, does not here make shoots equal in length, and I judge will not be equal to the Bedford willow, with which it is classed. The *Vitellina* is our common yellow willow, and is generally known. The *Rubra* and *acuminata* appear promising, I but have not yet headed them down.

In order to obtain shoots for basket making and other purposes, of the large growing species, such as *alba*, *russelliana*, *fragilis*, *Vitellina*, *decipiens*, &c., it is necessary to permit the root to acquire strength before heading down, and then to take off the trunk and branches at the height of six or eight feet, after which it will only require the sprouting surface to be diminished, if the shoots are too abundant and not long enough, or if the shoots are too strong, then to increase the sprouting surface, by leaving a few inches of the base of the shoot uncut, to produce shoots the succeeding year. But for the *Forbyana* and other small species, it is best to cut them near the ground, and they may be planted near together. I have several tufts or branches of the *Forbyana* planted about three feet apart, which are annually cut down, and produce abundance of good shoots every year.

But apart from the value of the several species for economical purposes, several of them may be used with advantage as ornamental trees and shrubs, among these, the *Caprea* or goat willow, with broad, oval leaf, is highly ornamental, more especially the male plant

during the flowering season. The *Pentandra* has smooth and glossy leaves, broader than is usual in the genus, with the odor of the Evergreen Bany tree; this is probably the most beautiful species.

The *daphnoides* and *pomeranica* have dark glossy bark, covered with a fine bloom. The *Rotundata* is remarkable for its nearly circular leaves. The *Rosmarinifolia*, a shrub five or six feet high, has leaves resembling the common rosemary. The *Croweana* an English species, growing to the height of ten feet, is among the most beautiful at the time of flowering. The difference of the species in form, size, and color; the general adaptation to, and great luxuriance in rich, cool, moist soils; should entitle them to a place in ornamental plantations, where the soil situation and other circumstances, are suitable.

ALAN W. CORSON.

Montgomery county.

For the Farm Journal.

Common vs. Shanghai Fowls.

Messrs. Editors:

There being no abatement of the "fowl mania," but rather an increase of the "premonitory symptoms," in various sections of the country—it may not be amiss to give you the result of an experiment on a small scale, by one who has had a slight affection—it may interest some of the many readers of the Farm Journal.

I would, however, wish to be understood that I did not take the disease in the ordinary way, but rather had it forced upon me by a very particular friend, (who shall be nameless) and who had been even then, nearly a year since, completely impressed with the affection. Time and again would he urge me to go into the "ranks of the fancy," showing conclusively (at least to his own mind) that this "mania" was no mania at all, but a bona fide fact, a matter of dollars and cents. That the breeding of the celebrated fowl was a more lucrative investment than any thing on which the farmers could at present employ their time and means. Stating that these fowls require less feed and would lay more eggs than our ordinary dung hill breeds, and were intrinsically of far greater value, &c., &c.

Well, you see, Messrs. editors, as I am rather of a phlegmatic temperament, I was too slow, behind the age, &c. Not "turning my spoon right side up when such golden showers were falling," in time to secure a share of the benefits accruing. As my friend—who, by the by, is contrary to myself, of a very affectionate and ardent temperament—could not rest easy until he should succeed in some way to enlist me in the fowl cause, and as no other mode would seem to answer the purpose, he very liberally (though it may have been only a bait thrown out to infect me with the prevailing mania) offered me three eggs of "Shanghaes" as a present—of course so disinterested

a favor could not be refused—and, consequently, I was fairly embarked in an enterprise “fair or fowl,” and the result of which I am now going to state.

The three eggs I placed under a common hen for incubation, and about the first of August last, had the satisfaction of seeing two chicks make their exit from the eggs, the third one being addled. Fortunately these chicks proved male and female. They were well cared for. They soon out-grew all the common stock of the same age. They put me in mind of nothing so much as the story of the boy, who took a night's lodging on a pile of guano: rising in the morning, he found to his great astonishment that his clothes had become far too small to contain his now overgrown carcass. Such appeared my Shanghaes, particularly the male. They have, however, by this time become more respectable in appearance, and I doubt if a more dignified specimen of the feathered “celestial” race could now be found. At six months old the hen weighs 6 lbs. and the male $7\frac{1}{2}$ lbs. Had they been raised in the spring, no doubt their weight would be considerably more.

I have already taken up more space than I intended, and must now give, in a few words, the main object of this communication—the result of this small experiment.

These fowls were hatched on the first of August; are now six months old. On the 19th January the hen commenced laying, and by the 1st of February, or in 13 days produced eleven eggs, and still continues to drop an egg a day. To compare them with the common fowls, I may say that I have sixty or seventy ranging the yard and barn, from all of which I procured four dozen of eggs during the month of January—less than one egg for each hen in 31 days and the Shanghai hen 11 eggs in 13 days, or about two dozen in one month. It would thus take two Shanghae hens, or say three, to produce as many eggs in a month as sixty or seventy common hens. This statement is perfectly true so far as it goes, and will probably seem incredible to many.

It rather exceeds the Rev. A. S. Bumstead's statement as given in vol. 1 pg. 19 of Farm Journal, that “one Shanghae cock and two hens will produce more eggs in three month's time, of a greater size and richer quality, than five times that number of ordinary hens will do in one year.” Some time after this statement appeared in the Journal, I. K. E. of Chester county, see (pg. 174, vol. 1,) gave the editor a pretty hard “hit” in regard to publishing such extracts, and desired that the Rev. gentleman “designate the variety so extraordinary, as a benefit to us farmers to enable us to avoid them.” I will merely add that my hen lays one egg a day, and my cock don't lay two, (too) and to enable the Dr. and others similarly minded, if they wish to avoid them, that my fowls are of the variety of yellow Shanghaes.

Respectful y, J. B. G.

MOUNTVILLE, Lancaster co., Feb. 5th, 1853.

For the Farm Journal.

Guenon on Milch Cows.

Having seen a short article in the December number of your valuable Journal, on Guenon's system of judging milk cows, and being a believer in the science, looking for information from every source, upon that subject, I thought the article alluded to would have called out a short response from some of your numerous readers, to throw some light upon it. As there are many believers within your vicinity who profess to understand the science, and practice upon it for their own use, I hope they will be willing to give us the benefit of their experience, as to whether it is true or false, according to their judgment. By so doing they will much oblige

A LEARNER.

February 16, 1853.

For the Farm Journal.

Cultivation of the Cranberry.

MR. EDITOR:—Permit me, through the pages of your Journal, to offer a few remarks upon the cultivation of the cranberry. The culture of this fruit has been much neglected in many of our States, and no crop, in my opinion, will pay the cultivator, on many soils, as well as the cranberry. One acre of well-prepared land will produce from one hundred and fifty to three hundred and fifty bushels of marketable fruit. The harvesting is done with an iron rake, made for the purpose, and one man, with a boy to gather up the scattering fruit, will gather from twenty-five to forty bushels per day.

The selection of soil suitable for their growth requires some observation and practice to ensure complete success. A clayey soil which contains moisture and is not liable to bake; a dark, deep loam with a mixture of sand; bogs or swamps which can be made moderately dry, are all well adapted to the growth of the cranberry. In fact, I have seen, even in bogs which during the greater part of the year are covered with water, the cranberry entirely in possession of the soil, rooting out all other vegetation. In our own county of Chester, there are now countless acres of idle and worthless land that with but little expense might be reclaimed and brought into condition for the culture of this fruit.

As far as I can speak from experience, there is but one variety that naturalizes itself and succeeds well on dry or upland soil; this is the “Bell” which is much larger than the “Barberry” or the “cherry,” and grows much in the form of an egg; and in the wild state grows on the edges of the cranberry bogs, inclining to spread its way to upland or dry soil. Persons commencing the culture should begin with those that have become naturalized to dry soil; by this means they will much sooner and with less expense get up a stock, as they increase very fast.

The soil, before planting, should be well prepared

by plowing and harrowing, and made quite even. Mark out the drills about twenty inches apart, and set the plants eight to twelve inches distant in the drills; they should have a slight hoeing at first, until the roots have taken a fast hold in the ground. After that they will need no other attention. In two or three years they will run together and cover the ground entirely over.

The fruit is much larger and of finer flavor grown by cultivation than in the wild state, and it readily keeps, from the harvesting of one year, until the next. The time for planting in spring, is from middle of March till first of May; and for fall, October and November.

G. December to January.

For the Farm Journal

Pennsylvania Seedling Fruit.

MESSRS. EDITORS:

I send you a description and outline of three apples, not yet generally known to the pomological public. I think these will prove to be desirable varieties, when once disseminated.

Fig. 1. WILLIAM PENN.—This tree came from seed was first noticed by S. W. Mifflin, of Columbia. Size above medium; color dull red, on a yellow ground, faintly streaked with light red; flavor pleasant, sub-acid, with a peculiar aroma; flesh firm, yellow, good; ripe

December to January.

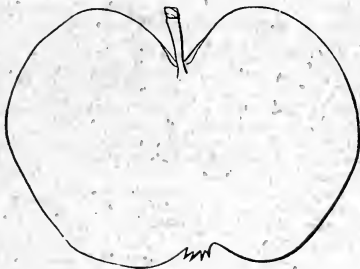


Fig. 1.

Fig. 2. MARY ANNE—This is also a seedling that originated in Columbia, within a few feet of the W. Penn. Color pale yellow, marked with small grey dots; size rather below medium; flavor crisp, pleasant, nearly sweet, juicy and good; ripe November to January.

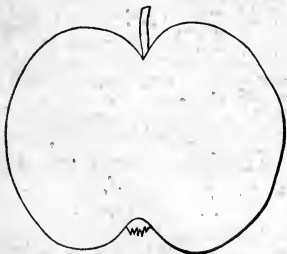


Fig. 2.

Fig. 3. WASHINGTON'S FAVORITE.—At the time that Gen. Washington resided in Philadelphia, he bought

up all the apples of this variety that he could procure. It was then growing on the farm, since owned by Dr. Parrish, near Philadelphia, from whence the

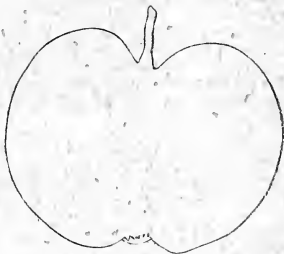


Fig. 3.

grafts were procured, and the name lost. From the fact of its being a favorite fruit of the General—it has here been known by the name designated—may

prove synonymous with some known variety. Size about medium; color yellow; form round, rather flat; flavor slightly sub-acid; flesh dissolving in the mouth, rich, juicy and very pleasant; ripe November to January.

Respectfully,

J. B. GARDNER.

Columbia, Pa., Feb. 12th, 1853.

Guenon on Milk Cows.

The following communication is by one of our readers, not a farmer, who has probably paid more attention to this subject, and is better posted up than any one in this section of country. He is often called on by farmers to buy their cows.

For the Farm Journal.

As your columns are open for the discussion of any subject that will benefit the farmers, I have thought there was none at this time of any more importance than raising stock; and within this vicinity than of good milk cows. I have owned Guenon's theory for 3 or 4 years, and believe in it. But seeing a notice of another work coming out, simplifying Guenon's theory, or making it plain to every reader, I purchased a copy as soon as received at the Agricultural Warehouse, and find many valuable suggestions worthy of being remembered, and would recommend to every one having a Guenon, to have the Treatise by John Nefflin confirming it. I may have occasion to speak of this again, and, perhaps, give my opinion upon it. But I say now, to every body raising or keeping milk stock, to purchase it. They will never regret the price paid for it: 30 cents.

A BELIEVER IN THE SCIENCE.

West Chester, 2nd mo. 17, '53.

Plan for Building a Lime Kiln.

Enquiries having been addressed us as to the best method of constructing a lime kiln, we applied to our friend, Jonathan C. Baldwin, formerly President of the Chester county Horticultural Society, and whose experience of many years on this subject, entitles his suggestions to as much weight as his well-known skill in cultivating and testing choice fruit has extended his reputation as a pomologist. He writes as follows:

"My experience of the best plan of constructing a lime kiln for burning wholly with wood, is, in the first place: select a suitable spot, a bank if practicable, and excavate the foundation. Lay out the bottom 7 feet by 9, the 9 feet extending from the eye back. Then lay out the eye 10 inches wide, through the breast, which should be 7 feet thick, and concave in front, which greatly increases the strength.

After the foundation is thus laid out, proceed with the building, which should be double; that is, build your wall next the bank from 1 foot to 15 in. thick, leaving about 6 or 8 inches short of the dimensions

already given, which lining is to be built of slate or soap-stone, 6 or eight inches long, or other stone that will stand the fire. The advantage in this mode is, that when any part of the kiln burns out, or the whole, which it will do, it can be repaired without pulling down the kiln.

At the height of 12 feet from the bottom of the kiln, place a pole directly over the centre of the kiln and eye the longest way, (9 feet) which may be a sapling, the heavy end being placed on the bank, and let it extend over the kiln at least 15 feet. Measure off 7½ feet from the centre, each way. Lay another pole across the kiln, crossing the former one at right angles in the centre. Measure 6 feet each way from the centre. You now have those poles 12 feet high from the bottom, which is the height of the bulge. Then drop lines from each end of the 15 feet mark, down to each end of the 9 feet; likewise from each end of the 12 feet drop lines to each end of the 7 feet. You now have the pot of the kiln laid out 7 feet by 9 at the bottom, and 12 by 15 at the bulge. The mason will find a great advantage in these lines, in giving the kiln a true and regular slope.

It is understood the shape of the kiln is to be oval. At this height lay out a bushel hole at the back part of the kiln, for filling and emptying. It should be 3 feet wide at the pot, splaying out to 5 feet. The kiln above the bulge, should be 3½ or 4 feet high, not more, and, carried up straight. The pot and breast should both be carried up at the same time. The eye 10 inches wide, should be carried up that width, 2 feet high in front, and 2 feet 5 inches inside. Next the pot, forming an inclined plane, the top stones should be large, as the grates on which the wood is thrown, rest on them. We then drop back, 4 inches on each side, which increases the eye to 18 inches, for the bushel to pass in and out. It is carried up straight 20 inches, and then brought over to close. The eye should not be built double, like the pot, but of large slate or soap stones to stand the fire. In describing the breast, I have said it should be 7 feet thick, and a concave semi-circle of about 12 feet radius. The wing should extend pretty well out, as it strengthens the breast very much to top, which should batter 1½ inches to the foot from bottom. There is no kiln so hard on the front, as those that are burned wholly with wood.

The kiln now being up, it is necessary to have a bench 6 or 8 inches thick, and 20 inches high inside the pot for filling.

A kiln as above, will hold 1,000 to 1,100 bushels lime."

How to Grow Rich.—A man who is very rich now, was very poor when he was a boy. When asked how he got his riches, he replied—"My father taught me never to play till my work was finished, and never to spend my money until I had earned it."

Our New Volume.

The present number closes the second volume of the *Farm Journal*. An index will accompany it, making a volume, when bound, which we think our subscribers will admit to contain much valuable matter, and practical experiments and suggestions, far more than remunerating them for the small price of subscription. It is intended to issue the twelve numbers of the new volume, within the present year, so as to make it commence with the year, hereafter, which we think will be more convenient and satisfactory. Our arrangements are such, that the volume now coming on the first of next month, will be superior to either of the preceding, not only in the amount of reading matter, which has already been increased three or four pages, but also, in the variety of topics of interest to the farmer, which will be treated of. Illustrations will accompany each number, consisting of original portraits of all kinds of stock, particularly of Pennsylvania; new and improved implements, and machinery, farm buildings, &c. The fruit department will receive especial attention, and we hope to have engravings of all our Pennsylvania seedling fruits worthy of cultivation. Ornamental trees and shrubbery, new and rare trees and plants, designing and laying out grounds, the cultivation of flowers, &c., shall all receive their share of attention. We have facilities for attending to these several branches, either ourselves, or by the promised aid of our correspondents, equal at least to any other agricultural Journal. Our subscription list has been very considerably increased since its removal to West Chester, and we hope for large additions to the new volume. Our friends through the State, who think Pennsylvania ought to have an agricultural paper, can greatly assist us by getting up clubs in their respective neighborhoods, and forwarding us the amount. Those who wish to discontinue, and we hope there will be but very few of this class, will please notify us before the issue of next number. Bills will be sent with the present number, which we shall be obliged by having the amounts remitted to us, as they are too small to admit of employing a collector.

George Walker's Premium Crop of Corn.

The manuscript report of the above sent us from Harrisburg, we find contains some errata, which should be corrected. Only two names were appended to it, that of Judge Wm. Jessup being omitted. As he was one of those who assisted in the measuring of the corn and surveying the ground, and as his name, so extensively known, affords in itself a sufficient guarantee of the correctness of the report, it is proper it should be added.

There was an omission also in respect to the distance. It should read "in rows $3\frac{1}{2}$ feet apart, running north and south, and 3 feet apart in rows running east and west." "Worked twenty six hills," should read "planted twenty six hills."

Wheat Bran as a Stimulant for Corn.

"Would you think it, I have found *wheat bran* a greater stimulant for corn than Chemical Salts, or Guano mixed with common salt, or mixed with Plaster of Paris, or even of rich hog-pen manure, or well-rotted summer cow-pen manure, and the corn nearly or quite as good as the best of the above, which was guano mixed with common salt, in the proportion of 200 lbs. to $\frac{3}{4}$ bush. salt."

L. W. ALLEN.

Caroline co. Va., Jan. 6, 1853.

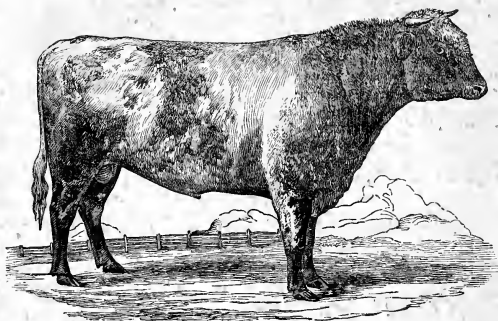
We copy the above from the *American Farmer*, Baltimore, which is, by the way, one of the best agricultural papers in the country, and abounds, both in its editorial, and original communications, with really practical and valuable matter.

The use of bran, as a "mineral food for the young Indian corn plant," was brought to the notice of the readers of the *Farm Journal*, page 56, of present volume, by our able correspondent and sound agricultural chemist, G. Blight Browne, of Montgomery county. His whole article should be referred to at this time. In it he says—"The bran, as soon as it has become wet, will enter into decay, (fermentation,) and carbonic acid will be formed and set free. Heat will be evolved. The free carbonic acid will aid in dissolving the mineral matter, and it will be taken up by the roots of the plant. The root will soon extend over a larger surface, and will be adequate to continue the supply without this artificial aid. Five bushels of bran by double measure, will be sufficient per acre, and the farmer will, if his land is in good order otherwise, be generously repaid in the harvest time of his corn."

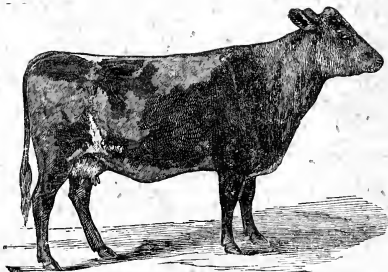
Rhododendrons and Kalmias.

Rhododendron maximum, and *Kalmia latifolia*, are two natives of Pennsylvania, unsurpassed in their natural beauty and profuse blossoms on the sides and tops of our mountains, by any thing we are acquainted with. They are always difficult to transplant, and flourish in open ground, or even in the shade, which is a cause of general regret. It appears by the following from David Thomas, of Aurora, and which we copy from *Ward's Horticultural Review*, that Lime even in small quantities is poisonous to them, and that they cannot thrive where there is any particle of it in the soil.

We have before us an original letter from David Thomas, a celebrated tree and fruit culturist in New York, to a lady friend in Michigan, who is an enthusiastic cultivator of plants and flowers. In this letter he recommends the soil taken from the brink of a ravine, where the lime has been leached out of it by the rains. He has tried the soil with entire success. Some peat earth may be mixed with it to advantage, provided it be brought from a locality where lime will not be likely to be mixed with it. The soil where they flourish in all their beauty in Pennsylvania, is formed by the disintegration of graywacke rocks, in which there is no lime. This peculiarity should always, we think, be regarded in the culture of these plants. They should always be planted in the shade, as they select shady woods for their *habitat* among their native hills in New York and Pennsylvania. If any of our citizens wish to cultivate these beautiful plants, it will cost them very little to try the experiment.



DURHAM BULL, HENRY CLAY, TWO YEARS OLD, BRED AND OWNED BY A. BOLMAR, WEST CHESTER, Pa.



DURHAM COW, CHERRY, SIX YEARS OLD, BRED AND OWNED BY A. BOLMAR, WEST CHESTER, Pa.

Improved Stock.

The portraits of bull and cow on opposite page, engraved from daguerreotype likenesses, are specimens of what may be attained by scientific and judicious crosses of choice native stock, with selected thorough bred Durham bulls. They are grade animals, the bull being 15-16, and the cow $\frac{1}{2}$ Durham, and are fully equal in some points to thorough bred. They were bred and are now owned by A. Bolmar, of West Chester, proprietor of the celebrated boarding school Institution, which bears his name, and whose herd of cows and heifers, 41 in number, all of his own raising, and more or less mixed with Durham blood, have been pronounced by good judges superior as a whole to any dairy of the same number in this section of country.

The bull, "Henry Clay," was only two years old, the 24th of December last, and weighed, the day the daguerreotype was taken, 1697 lbs. He measures from between his horns, to the perpendicular line of the tail 10 feet 6 inches, and 10 feet round the girth behind the shoulder. His sire was got by imported Yorkshireman, bred by Thomas Bates, Kirkleavington, England, selected there and brought into this county a few years since by Joseph Copé, dam Virginia, out of imported "Strawberry girl," by imported bull, "His Grace." "Henry Clay" was got by P. Worth's bull, dam Red Rose, by young Prince of Wales, Grand dam Rose by Strode's bull, Grand dam Muley, a half blood by a bull of John Hare Powell's. Muley was a very superior cow of fine points, large size, and gave 32 quarts of milk per day, and made 12 lbs. of butter per week. She was selected by A. Bolmar, as the starting point in breeding, and the perfection his beautiful herd has been brought up to, evinces his judgment in her selection and subsequent crosses. Cherry No. 2 is also descended from her, being $\frac{1}{2}$ Durham; got by Traveler out of Rose. Cherry is a splendid cow, and on the loin, back and hips, and in her straightness behind, is seldom surpassed. She is also very fine in the bone.

This herd of cows and the complete cow-house & fixtures, are models in their way, and well worthy of attention.

The cow stable is 104 feet long, ceiled and plastered, the floor all paved with brick. It is 24 feet wide, allowing a space for cows to stand, of 9 feet, with a passage of 5 feet wide behind, feed-trough 2 feet, and an entry 8 feet wide, fronting the stalls, and covered with mortar floor. There is a gutter behind the cows, graded so as to have a two feet fall in the length of the stable, and a sink at the lower end to catch urine, &c., which is mixed with soil, and carried out on the land. Nothing of this kind is allowed to be wasted. Each cow gets about half bushel of sugar beets per day. As they get old so as to be unprofitable for dairy purposes, they are fattened and slaughtered for the use of the school, weighing gene-

rally from 7½ to 800 lbs. One killed last fall, weighed 810 lbs. Their places are filled up by the young heifers coming in.

Water is thrown into the barn-yard by hydraulic ram, affording a constant supply.

The farm attached to the Institution, of over 100 acres, under the charge of his English farm manager, John Lac, is a pattern of clean tillage, neatness and productiveness not often met with. The pastures are well set with natural green grass, (*poa pratensis*), which is sustained by top-dressing. All the buildings and fixtures for cooking and steaming food, piggyery &c., are of the most complete description. The latter, containing at this time 50 hogs, shall be described in our next. They are of the Chester county breed, and have been sold to various parts of the Union. A daguerreotype of one of his superior boars is in process of engraving, for next number of the Journal.

Guenon's Method of Choosing Milch Cows.

We give below a report of a Committee of the Philadelphia Agricultural Society, appointed to test the correctness of Guenon's theory, and also the result of the examination of some cows, made by John Nefflin, who appears to have verified and tested it by many years of observation. He has compiled a pamphlet, on the subject from which these extracts are taken, detailing the method of judging cows, with seventy-eight illustrations. It is published by C. B. Rogers, 29 Market st., Philad., and may be had of him, and also at the Agricultural Warehouse in this Borough; price 30 cts. Although this system was much ridiculed at first, we consider its principles as fully established by actual experiments. It has been *proven* to be correct, by many of our best dairymen in this section. Like many other things, however, it requires to be studied carefully, not merely glanced over in a cursory manner. The system has been discredited in some places, by persons mastering a *few* of the points, and undertaking to judge as if they had mastered the *whole*. It is not difficult to learn, but nice details are to be understood, and examined; and *time, practice*, and close observation, are necessary. With these, every farmer can easily comprehend the system, and save himself a heavy loss, in rearing and keeping poor milkers. Nefflin's work is substantially the same as Guenon's, somewhat reduced in size, and perhaps simplified, especially that part relative to crossing in breeding. On this head we quote the following, and recommend farmers to obtain both works.

REPORT

Of the Committee appointed to investigate the merits of Mr. John Nefflin's simplification of Guenon's method of testing the value of milch cows.

The Committee to whom was intrusted the examination of Guenon's system, very respectfully offer the result of their proceedings.

As the subject is one of great practical importance to the farmer, and no confidence in it can be created by vague generalities or isolated assertions on the part of those who may have given to it some attention, the Committee have endeavored by personal observation to verify the published statements. The fortunate arrival in this country of a German farmer, Mr. Nefflin, has offered a most happy opportunity of developing the nature and character of Guenon's observations, and the mode in which an adept in the science proceeds in his examinations. More than forty cows were examined by this gentleman in the presence of the members of the Committee. All the remarks of Mr. Nefflin, all the questions and answers, were taken down at the moment by Mr. Arthur Cannon, photographic reporter; and all his statements were compared with those of the owners of the cows. In this form and in this critical mode of proceeding, the Committee thought it possible to remove every doubt they themselves or others might feel in the truth of the system, and be enabled to offer to the Society and the Agricultural community a clear and truthful history of this interesting discovery. After a full and particular investigation, carried on in the most searching manner, and sharpened by incredulity, the Committee have no hesitation in giving their adhesion, and expressing their concurrence in the views of Guenon. The precision and accuracy with which Mr. Nefflin describes the qualities of the animals, and the unhesitating manner in which he revealed all their properties, could not but impress the Committee with an entire reliance on his own skill, and a perfect confidence in the views of his teacher.

Still, though the Committee have no hesitation in offering this opinion, as the matter is one of the utmost importance, they deem it proper to recommend that if there remain any doubt on the part of the Society, as to the clear and complete demonstration of the truth of Guenon's observations, or if there are individual members who hesitate to concede to the point, the examinations should be continued until all scepticism, as far as possible, be removed.

A. L. ELWYN,
GEORGE BLIGHT,
ISAAC NEWTON,
JOHN WILKINSON,
SAMUEL WILLIAMS,
SAMUEL C. FORD.

The following certificates from Messrs. Ford and Wilkinson, whose cows were examined by Mr. Nefflin, are presented for the purpose of conveying to the reader a clear idea of the method of examination, and removing any doubts that might exist in regard to the practical application of the theory by every farmer. When it is remembered that Mr. Nefflin had no prior knowledge of the character of the cows submitted to his inspection, (being an entire stranger in the vicinity of Philadelphia), these testimonies from gentlemen of the highest respectability, furnish most conclusive evidence of the value of the discovery, and should at once commend it to the earnest attention of the agricultural community generally.

MR. FORD'S STOCK.

1st Cow. "Is a bastard of the 3d class, 2d order, and is an excellently made cow; her milk is very rich, of which she will yield 16 qts., but she dried suddenly after becoming pregnant."

I certify the above is a correct report of the qualities of the cow.

SAMUEL C. FORD.

2d Cow. "Is a bastard of the 3d class, 2d order, and has no mark; will calve about the 1st of March,

a month prior to which time; she will suddenly decrease in her yield of milk; when not in a state of pregnancy is a good milch cow."

The same as regards this cow.

SAMUEL C. FORD.

3d Cow. "Is of the 4th class, 2d order, the escutcheon of the fork shape, though not so perfect as it ought to be; will give 15 or 16 qts. of milk; about 5 or 6 weeks after calving her yield is most plentiful; her milk is very good."

Correct in every respect.

SAMUEL C. FORD.

MR. WILKINSON'S COWS.

No. 1. Belongs to the 2d class, and 2d order, and will yield from 16 to 18 qts. per day. She has not the two oval marks distinct, or she would rank first class. She will hold her milk up to the time of calving.

No. 2. "Belongs to the 2d order, and 1st class, and would, if she were as large as No. 1, give 20 qts. of milk per diem, but as it is, should give 15 or 16 qts."

No. 3. "Belongs to 2d class and 3d order." The examiner here remarked that he supposed that Mr. W. had been near 20 years in getting his herd to such perfection, to which Mr. W. replied that he had not owned a cow in his dairy more than two years and three months, but that he had selected them on this system.

It is due to Mr. Wilkinson to say that the examiner, after he had examined all his cows, acknowledged that in all his long experience with cows, he had not in his whole life seen so large a number of such highly marked cows in any herd, as he found in Mr. W.'s herd of 8. Many other facts which must have been highly gratifying to Mr. W., were mentioned, but are necessarily omitted.

CERTIFICATE OF MR. WILKINSON.

The description given of my cows by Mr. Nefflin, after he examined them by his improved Guenon system, is in the main very correct, and satisfies me that this is the only reliable system by which cows can be selected.

JOHN WILKINSON.

Mount Airy Agr'l Instituté, Germantown, Pa.

THE CROSSING OF BREEDS.

Crossing is the coupling of male and female animals, provided with milk-marks from different classes or orders, as also of different races.

This crossing produces two kinds of results. *Animals, having similar milk-marks, but from different races, particularly when the male belongs to a better race, may be coupled without injury to the yield of the milk.* But crosses between different classes always produce unfavorable results, and more so when the bull belongs to an inferior order, or even to an inferior class.

Such pairing of the sexes will reduce the breed to a lower class or order; it may even cause a great disfigurement in the milk-mirror, and make a classification impossible, when, as a matter of course, it becomes impracticable to ascertain the order to which the animal belongs.

Advantages can only be obtained by the crossing of different breeds or races, when the mirrors of both animals correspond, or still better, when the mirror of the male belongs to a higher order.

If however the object of crossing is to obtain a heavier stock of cattle, it is advisable rather to procure a male animal, which of course must be provided with the corresponding milk-marks. By this means the object of the crossing will be obtained sooner than by the purchase of a cow. Nefflin's Treatise.

BOOK NOTICES.

"SOIL OF THE SOUTH." This is a periodical of over thirty pages, published at Columbus, Georgia; well sustained in its several departments, both editorially, and by a large corps of able contributors. We delight to see agricultural papers so well stored with *practical* articles, as the "Soil of the South," in preference to long communications, on mere abstract subjects. This paper well deserves, and no doubt receives, extensive patronage.

"MICHIGAN FARMER." This is just such a paper as we should expect in such a quarter; spirited and overflowing with good things like its own exuberant soil. It seems to have sprung at once into general popularity, and has made sad havoc in Michigan among subscribers to papers, published in New York, and other States. We wish it the best success.

"WESTERN PLOUGH BOY," published at Fort Wayne, Indiana, No. 1, of Volume 1, is before us. This is a new paper called into being, by the *wants* of the farmers of that section; and from the specimen before us, we think will be fully equal to its task. We hope it will soon be "out of the woods" itself, with a long list of subscribers, and also be the means of assisting to make many a good clearing, and *improved* farm.

"JOURNAL OF AGRICULTURE," Boston, W. S. King, Editor, Mapes & Bartlett, assistants. This is one of our *standard* papers, most ably conducted, and which always repays examination. Some of our exchanges do to glance over, this requires *reading*, and elicits *thought*. The science as well as practice of agriculture, is elucidated in its pages. One of its editors, at least, if we are to judge, by some recent "*passages*" (not of the most amicable nature with the Genessee Farmer) writes with a *steel* pen. Unfortunately, it seems to have been "Mauling" the wrong man. One *subject*, however, does as well as another, to *exercise* upon. Should the Farm Journal ever come under the displeasure of the aforesaid *steel* pen, like the anecdote told of Captain Scott, we now offer to come down, and surrender at discretion *beforehand*. Is this satisfactory?

"WARDER'S WESTERN HORTICULTURAL REVIEW," Cincinnati, \$3 per annum. This is the able representative of the West, as the Horticulturist is of the East. It abounds and overflows with valuable matter, and is well appreciated wherever it goes, and that is pretty much all parts of the country. The Editor is fortunate in his location, and has a clear field before him, which he knows how to occupy. We studied Virgil's Georgics in the same school, some *few* years since, in Philadelphia. He knew how to *make his mark*, then, and his paper shows he can do it *yet*.

"SCIENTIFIC AMERICAN," a weekly Journal, published in New York by Munn and Co.; price \$2 per

annum. Though not exactly an agricultural paper, it is a standard work on scientific matters, is ably supported, abounds in illustrations in each number, and deserves the patronage of all business men, who wish to be posted up with the improvements of the day.

"OHIO FARMER," published at Cleveland, a weekly paper, \$2 per year. Thomas Brown, Editor. This is in its second volume, is of large newspaper Form, combining news of the day, with a department appropriated exclusively to Agriculture and Horticulture. It is well illustrated, and deserves to be well supported.

"HORTICULTURIST," published at Rochester, and edited by Barry, price \$2. This well known periodical is fulfilling the expectation we formed of what it would be, under its present Editor. It fully maintains its high reputation, and no Fruit Grower, or resident in the country who wishes to beautify and adorn his home, with the attractions of choice trees and shrubbery, and flowers, and pleasant walks, should be without it. With its beautiful engraving, it is an ornament for the centre table, or the book case.

SAXTON'S RURAL HAND-BOOKS.—Under this title, C. M. Saxton, Agricultural book publisher, New York, is issuing a series of cheap and useful little books that are worthy of a place in every farmer's library. We have before us, of these books already published:

THE AMERICAN KITCHEN GARDEN, containing practical directions for the cultivation of vegetables and garden fruits, by T. G. Fessenden.

THE COW, Dairy Husbandry and Breeding Cattle, by M. M. Milburn, author of the prize essays of the Royal Agricultural Society, England, edited by Ambrose Stevens, editor of Youatt and Martin on cattle.

EVERY LADY HEROWN FLOWER GARDENER.—Addressed to the industrious and economical; containing simple and practical directions for cultivating plants and flowers in the garden and in rooms. By Louisa Johnson. Revised from the 14th London edition, and adapted to the use of American ladies. This book contains a deal of information that will be found very useful to cultivators of flowers. The American editor, however, committed an oversight in not reversing the "monthly notices" in chapter 10th. The climate of England differs so materially from our own, that "rules for planting" during the winter months *there* will be utterly inapplicable *here*. The price of these Hand-Books is uniformly 25 cents.

THE MILK TRADE IN NEW YORK AND VICINITY, by John Mullaly, with an introduction by R. T. Trall, M. D. Fowlers & Wells, N. York. Price 25 cents.

In this little volume we have an account of the sale of pure and adulterated milk, the daily and yearly consumption, the amount of property invested in the business, injurious effects of impure milk on children, advice to country dairymen, &c. This work is worth the cost, if for nothing else than to learn the process

by which New York is supplied with milk by her own "City Dairymen." The operations of these large swill milk establishments, as detailed in this book, would be utterly incredible, if the facts were not too well established to admit of a doubt in the matter. We shall make some extracts from this work in our next number.

THE PROGRESSIVE FARMER: A scientific treatise on Agricultural Chemistry, the Geology of Agriculture; on Plants, Animals, Manures, and soils. Applied to practical agriculture by I. I. Nash, instructor of Agriculture in Amherst College, &c., &c. C. M. Saxton, New York. Price 50 cents.

A most useful and excellent publication, and one that we have no hesitation in recommending every farmer to purchase and carefully read and study. Our word for it, he will close the volume a *better* farmer than when he opened it.

WORK FOR THE MONTH.

Farm.

Sow clover seed on wheat fields, before the ground gets settled, at the rate of 5 or 6 quarts to acre. Timothy, Italian rye; green-grass, &c., may also now be sown, if not done in the fall. Use none but clean seed. Plough ground and put in oats crop as soon as the weather will admit, sowing not less than 2 to 3 bushels to acre. Pass a roller over after harrowing. Roll also mowing and recent pasture ground. This settles such roots as have been heaved up by winter. Sow plaster, one bushel to acre, over all the grass fields. This should be done this month, so as to have the benefit of moisture in the soil, and spring rains. The ammonia in rain water by combination with plaster, forms the non-volatile sulphate of ammonia. The effects of plaster are not so observable in a very dry season. Guano mixed with plaster may also be sown with advantage as a top dressing to grass lands, in a damp spell of weather, or just previous to rain; but super-phosphate of lime for this purpose is preferable. Haul out manure from barnyard for corn and potatoe crops, which are gross feeders, and require it; using for wheat crop in fall, guano and super phosphate of lime, thus making *more corn and more wheat*. Hire an extra hand or two for a few weeks, to accomplish this in season. The fermentation of the manure in the soil stimulates the early growth, and affords food for the maturing of the crop.

Plough deeply and subsoil corn ground. Top-dress winter grain which was not manured last fall. Plant potatoes for early crop, as soon as ground will admit. Give particular attention to cows which have calved, and ewes having lambed. Succulent food, such as turnips, carrots, beets, increases the flow of milk, and should always be given in addition to grain and hay. Feed the mothers well, is the true plan to make good lambs. Have a piece of early pasture ground to turn them on. Give extra feeding to working cattle. At leisure times, clean out thoroughly, and whitewash poultry houses inside. Pick stones off mowing fields. Open the mouths of drains.

Fruit Orchard.

Attend to directions of last month, and perform what was omitted. Planting of trees in this section can be done during this month. See directions for planting in present number of Farm Journal. Select

the best varieties of fruit trees, and plant apples from 35 to 40 feet apart. Peach trees 20; also cherries, pears and plums. Dwarf pears, 10 to 12. Grafting may be done this month. Prepare grafting wax by mixing three parts of bees wax, three parts of rosin, and two of tallow. Plant out gooseberry and currant cuttings, first removing all the lower eyes. Trench and prepare the ground thoroughly with short manure. Grape vine cuttings should be planted with two eyes out of the ground, and in a soil rather sandy and moist. Trim grape vines at once, if not already done, and dig in around roots well rotted manure. Strip off of all trees, cocoons and larvæ of insects, and apply wash before recommended. Apply salt to quince trees. Manure and clear up strawberry and raspberry beds, and make new plantations of each. Uncover such of the latter as were laid down last fall for protection.

Vegetable Garden.

The operations of the garden for this month must depend on the weather, and the condition of the ground. Such seeds as are not easily injured by frosts should be sown, such as peas, beets, parsnips, lettuce, radish-seed, onion-seed and sets, early carrots, asparagus seeds for new beds; and plant out two year old roots, cabbage-seed, &c. If the weather is suitable, cabbage, lettuce and cauliflowers may be planted out from frames. Uncover spinach, parsley, lettuce, &c. Trench ground for horse-radish, and set out pieces of old roots in rich soil. Dress up rhubarb, and manure thoroughly if not already done.

Give close attention to frames, &c., and cover on cold nights. Give air on fine days. Tomato, pepper and egg plants, which have grown thickly, should be pricked out into other frames. Start Lima beans in sods inverted, within doors, so as to be ready for planting out for early crops, so soon as the weather is settled. Set out beds of sage, sweet marjoram, winter savory, pennyroyal and other perennial herbs, by dividing the roots of old plants. Plant sweet potatoes in hot beds for sprouting, and cucumbers in frames for forcing.

As a general rule in gardening, make deep soil, manure heavily, and use plenty of seed. Better to thin out than to have to re-sow.

Flower Garden.

This is a busy month in the Flower Garden. Remove the covering from the roses, and all half hardy things. Loosen the fastenings of junipers, Irish yews, &c., by which they had been secured against winter storms. Prune roses and flowering shrubs. To prune roses, observe in the running varieties, to cut out as much old wood as possible, leaving only shoots of the previous summer's growth; shorten them one-third, and secure them firmly to the trellis or stake. Daily roses treat as above, only shorten their shoots two-thirds. The Hybrid perpetuals, and hardy garden roses should be pruned back to three or four eyes of the old wood. Roses will give more satisfaction by being closely pruned, than otherwise. In pruning shrubs, cut out any dead wood; thin out the branches where they crowd each other: shorten any straggling branches; by this means they will assume a good shape. Secure honeysuckles, clematis and other running vines firmly to their trellises. Manure liberally roses and flowering shrubs. This is a good time to plant all kinds of shrubbery and evergreens, and all kinds of hardy biennials and perennials. All such as have grown too large should be taken up, separated and replanted immediately. Remove the covering of leaves or litter from the tulip beds, or other articles which had been protected by

them during winter. Tulips, hyacinths and all other hardy bulbs may be planted early this month. Trim and replant box-edging. Manure and dig flower beds. Sweep clean and roll well lawns and grass plats. Laying sod should be attended to this month. Clean and roll gravel walks, and make everything look neat and clean.

Now is the time to raise annuals from seed for early blooming. For a selection of varieties, and the method of raising them, we would refer to an article published in the Journal of last month. Plants in windows which have done blooming, should be removed to a cooler place, and their shoots shortened considerably. Plants in cellars should have air admitted to them freely in mild weather, and be watered more liberally than during winter.

National Agricultural Society.

WASHINGTON, Feb. 3.

The Agricultural Society met at 9 o'clock this morning. Nineteen States were represented, and about 100 members were present. Various committees reported an amendment to the Constitution, changing the time of the annual meeting, to the last Wednesday of February, which was adopted.

Mr. Wheeler, of Mass., submitted a proposition to reduce the terms of admission, and annual subscription members. This was debated and rejected.

The following persons were then elected honorary members:—President Fillmore, Gen. Pierce, Samuel Appleton, Thomas H. Perkins, Robert G. Shaw, Edmund Ruffen.

The special order, a resolution to memorialize Congress to establish a department of Agriculture, was taken up.

Mr. Calvert supported it. It was due, he said, that this great interest, embracing four-fifths of our population, should be represented in the cabinet councils.

Messrs. French and Mapes briefly advocated the resolution, when it was adopted unanimously.

President Fillmore and Secretary Stewart now entered the Hall, and were received with marked attention, the members rising.

The Society then balloted for officers, and the following were elected:—

President—Marshall P. Wilder. Vice Presidents—Maine, Ezekiel Holmes; New Hampshire, George W. Nesmith; Vermont, Frederick Holbrook; Massachusetts, B. V. French; Rhode Island, Josiah Chapin; Connecticut, S. D. Hubbard; New York, H. Wagner; New Jersey, J. J. Mapes; Pennsylvania, F. Watts; Delaware, C. P. Holcomb; Maryland, W. D. Bowie; Virginia, G. W. P. Custis; North Carolina, H. K. Burgwin; South Carolina, John Witherspoon; Georgia, P. M. Nighteagle; Alabama, Richard Jones; Mississippi, A. H. Beques; Louisiana, A. B. Romar; Ohio, Samuel Medary; Kentucky; Robert Mallory; Tennessee, Meredith P. Gentry; Indiana, Joseph A. Wright; Illinois, Stephen A. Douglass; Missouri, R. Atchison; Arkansas, T. B. Flournoy; Michigan, J. C. Holmes; Florida, Simmons Baker; Texas, Thomas J. Rusk; Iowa, M. F. Colbaugh; Wisconsin, A. C. Ingham; California, M. Horner; District of Columbia, Joseph H. Bradley; New Mexico, J. M. Baird; Minnesota, H. H. Sibley; Oregon, Joseph Lane; Utah, Jos. S. Hayes.

Executive Committee—C. B. Calvert, J. D. Weston, Arthur Watts, John A. King, Moses Newell, Richard Peters.

Corresponding Secretary—J. G. Kennedy.

Recording Secretary—W. S. King.

Treasurer—Wm. Selden.

The Treasurer reported that the funds of the Society had been augmented nearly \$2000 since his arrival yesterday.

Dr. Eliwyn presented a paper written by Prof. Booth, of Philadelphia, and arguing that the analysis of soils in the present state of Chemistry, is of no immediate practical value to the farmer.

Prof. Mapes said he stood ready to refute every position assumed in the paper, and stated many interesting facts against the theory. After an animated discussion, the paper was withdrawn.

On Motion of Mr. Poore, circulars were directed to be addressed to the Home and Foreign Agricultural Societies, proposing an interchange of publications.

Major Wheeler suggested the propriety of memorializing Congress to establish a National Agricultural School. The subject was deferred until the next annual meeting.

EVENING SESSION.

The Society re-assembled at 7 o'clock this evening. Professor Mapes delivered an interesting lecture on fertilizers. After which a resolution, complimenting the officers and the reporters, was passed. The Society then adjourned to the last Wednesday in February, 1854. The Hon. Samuel Medary from Ohio, participated in the deliberations.

Pennsylvania Horticultural Society.

The stated meeting was held, as usual, on Tuesday evening, Feb. 15, in the Chinese saloon. The President in the chair. To the numerous visitors in attendance on the occasion, the exhibition assuredly afforded much gratification. Many choice specimens of green house plants were shown in the collections from four of our best conservatories. Among them a fine plant of the *Acacia pubescens* in full flower, from Gen. Patterson's house, stood prominent. A very well grown specimen of *Chorozema varium* in rich bloom, was seen in Wm. W. Keen's display from West Philadelphia. Frederick Lennig's gardener exhibited a fine table of Camellias and another of choice plants. Among the Camellias was a plant of the famed Ducca Visconti, displaying a beautiful flower and seen for the first time. On the table furnished by R. Buist's foreman were many choice plants, two of which were not seen before at our meetings, the *Epanthis candidissima* and *E. Minuta*. In Mr. Cope's collection of select plants were a handsome *Abutilon Striatum*, and a new species, *Begonia albo-occinea*. Cut flowers of Camellias were brought from Mr. Buist's, Mr. Sherwood's, Mr. Lennig's, and others. Designs and baskets of cut flowers were presented from C. Cope, R. Cornelius, and R. Kilvington.

Thomas Hancock exhibited fine Easter Beurre Pears. Mrs. Smith's gardener, five dishes of Pears. M. W. Roe, two kinds of Apples; and Robert Cornelius' gardener, three varieties of Apples.

On the vegetable tables were to be seen, from Mr. Cope's forcing houses, Cucumbers, French Beans, Tomatoes, and Mushrooms. From Mr. Fisher's—fine Cucumbers, Mushrooms, Lettuce, &c. From Robert Cornelius', many good culinary articles. Thomas F. Croft presented a fine display of Rhubarb.

Premiums awarded were as follows:—

Camellias—For the best six plants, to John Pollock, gardener to F. Lennig; for the best six cut flowers, to Thomas Fairley, foreman to R. Buist; for the second best, to Isaac Warr, gardener to John Sherwood. *Primula sinensis*—for the best six plants, to Benjamin Gullis. *Plants in Pots*—for the best twelve, to John Pollock, F. Lennig's gardener; for the second best, to

Wm. Gracey, gardener to Wm. W. S. Koen, West Philadelphia; for the third best, to Thomas Fairley, R. Buist's foreman. *Plant in a Pot*—for the best, the *Acacia pubescens*, to Isaac Collins, gardener to Gen. Patterson. Plants shown for the first time, a special premium of \$2 to R. Buist's foreman, for, *Euphorbia minuta* and *E. candidissima*. Another of \$1 to Thos. Meehan, gardener to C. Cope; for *Begonia alba-coccinea*, *Boquet design*, for the best, to Thos. Meehan; for the second best, to Thomas Meghran, gardener to R. Cornelius. *Basket of cut flowers*—for the best, to Wm. Hamill, gardener to Mr. Fisher; for the second best, to Robert Kilvington. Aud for a beautiful display of *Hyacinthus*, a special premium of \$3 to Peter Raabe. The Committee specially notice a fine specimen of the *Camellia* variety of Duca Visconti from F. Lennig's, an Italian variety, and shown for the first time. Also a plant of the *cypridium acule*, a native, shown by H. C. Hanson.

Pears—For the best ten specimens, Easter Buerre, to Thomas Hancock; for the second best, Glout Moreau, to F. Guoin, gardener to Mrs. J. B. Smith.

Apples—for the best ten specimens, Newtown Pippin, to N. W. Roe, for the second best, the same kind, to R. Cornelius' gardener.

Vegetables—For the best display of amateur gardeners, to Wm. Hamill, gardener to Mr. Fisher; for the second best to Thomas Meghran, gardener to Robert Cornelius; and a special premium to Thomas S. Croft for a very handsome display of Rhabarb, containing five named varieties.

An interesting ad interim report from the Fruit Committee was submitted of the objects shown before them since the last stated meeting.

The President appointed the Committees for the ensuing year.

Ordered. That the thanks of the Society be tendered to M. P. Wilder, of Massachusetts, for the gift of a copy of Dr. Harris's Report on Insects injurious to Vegetation, last edition, and the Proceedings and Reports of the Massachusetts Board of Agriculture.

Northumberland County Agricultural Society.

The Northumberland county Agricultural Society was organized on the 24th of May, 1851.

Samuel Hunter was elected its first President, Joseph R. Priestly was next chosen, and after him, the present incumbent.

The following is a list of its officers:

PRESIDENT—James C. Lerou.

VICE PRESIDENTS—George C. Walker, John Montgomery, Amos E. Kapp, Jacob Seasholtz, William B. Kipp, Jacob Hilbish, David L. Ireland.

CORRESPONDING SECRETARY—David Taggart.

RECORDING SECRETARY—Wm. J. Greenough.

TREASURER—Wm. L. Dewart.

BOARD OF MANAGERS—James Pollock, Alexander Jordan, Jesse C. Horton, Samuel Shannon, William Forsythe, James Eckman, William Fegely, William Deppen, Phillip Oherdorf, A. J. Fetzor, Jos. Weissel, Felix Mourer, Samuel John, Phillip Spatz, Gideon Kremer, James Beard, Sr., Charles Riddle.

The first fair was held at Sunbury, on the 8th of October, 1851. The exhibition was creditable, and called out an unexpectedly large concourse of people.

The second fair came off at Northumberland on the 8th and 9th of October, 1852. This far exceeded the hopes of its most sanguine projectors, both in regard to the character of the exhibition and the numbers that attended it.

The next will be held at Milton early in October.

Each year several hundred dollars have been paid

out in prizes, and yet, pecuniarily, the Society holds its head above water, and looks forward to still greater achievements. It has already been the means of stirring up the neighboring counties. Union, Montour and Columbia have organized flourishing and energetic Societies.

Annual Meeting of the Susquehanna county Agricultural Society.

The annual meeting of the Society was held on Wednesday evening, January 19th, 1853. The president, William Jessup, in the chair.

The report of the Treasurer was presented, read, and on motion adopted and directed to be printed. On motion, a committee of five were appointed to nominate officers, viz: Franklin Lusk, Thomas Johnson, John F. Deans, Henry Drinker and Hyde Crocker.

The report of the committee on vegetables was read, recommending a special premium to Robert Kent for potatoes, 173 bushels per half acre. On motion of William H. Jessup, the Society awarded to Mr. Kent one year's subscription to the Pennsylvania Farm Journal.

The report of the Committee to nominate officers was read, and on motion the following officers were appointed for the ensuing year:

PRESIDENT—Caleb Carmalt.

VICE PRESIDENTS—Thomas Nicholson, Thomas Johnson.

CORRESPONDING SECRETARY—Samuel A. Newton.

RECORDING SECRETARY—William H. Jessup.

TREASURER—George Fuller.

MANAGERS—Hon. William Jessup, Henry Drinker, Gilbert Warner, Martin L. Catlin, John F. Deans, Hiram C. Concklin.

On motion of Col. F. Lusk, the following resolution was adopted:

Resolved, That the members of the Susquehanna county Agricultural Society hereby cordially acknowledge their indebtedness to the Honorable William Jessup, (late President of said Society,) for his unremitting exertions and effective services in promotion of the interests of said society.

On motion, the Society awarded discretionary premiums to George Walker for 160 bushels of corn raised to the acre, and to Hyde Crocker for a very large yield of the same.

On motion, the Society adjourned to meet on Tuesday evening, of the first week of April Court.

WM. H. JESSUP, Sec'y.

State Poultry Society.

We have received a pamphlet containing the Constitution and By-Laws of the State Poultry Society of Pennsylvania. The following are the officers of the Society for 1853:

PRESIDENT—John Price Wetherill.

VICE PRESIDENTS—James Andrews, Wm. M. Swain, James L. Claghorn, Samuel T. Altamus, John Swift, William H. Stewart.

TREASURER—William Stevenson.

CORRESPONDING SECRETARY—Robert A. Smith.

RECORDING SECRETARY—James Le Fevre.

BOARD OF MANAGERS—William Struthers, Jesse M. Williams, John B. Perry, Charles K. Engle, Edwin R. Cope, John Oakford, Fredk. G. Wolbert.

EXECUTIVE COMMITTEE—Jesse M. Williams, C. K. Engle, Fredk. G. Wolbert.

COUNSELLORS—Hon. William D. Kelly, Christopher Fallon, Esq., Benj. H. Brewster, Esq., Const. Guillou, Esq.



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